

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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No. 2312.—VOL. XLIX.

LONDON, SATURDAY, DECEMBER 13, 1879.

[WITH SUPPLEMENT.] PRICE SIXPENCE.
PER ANNUM, BY POST, £1 4s.

**MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER.**
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.
BUSINESS negotiated in Stocks and Shares not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing closing prices of the week.

BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUUSTELL.

SPECIAL DEALINGS in the following, or part:—
50 Asheton, 22s. 50 Flagstaff, 26s. 3d. 50 Pandora, 13s. 6d.
50 Almada, 7s. 40 Glyn United. 15 Panulicillo, £4 15s.
20 Canada Gold. 100 Herodsfoot, £3 1s 3d. 100 Pestarena, 6s.
35 Clementina. 50 Javali, 8s. 100 Parys Corporat., 19s.
20 Colorado, 3s. 9d. 20 Killifreth, 15s. 20 Richmond, £9 7s.
25 Devon Consols. 25 Leadhills, £4 12s. 6d. 30 South Darren, £23 10
25 East Caradon, £23 1/4. 10 Mineral Corporation. 25 Tankerville, £26.
10 East Lovell, £2. 20 Morfa Du, 15s. 10 Van, £23 3/4.
25 East Van, £2 1/2. 10 New Zealand Kapanga 10 West Asheton, £23 1/4.
50 East Roman Gravel. 12s. 6d. 20 West Chiverton, £23 1/4.
30 Eberhardt, £23 1/2. 25 No. D'Eresby Mount, 20 Wheal Crebor, £7.

BUSINESS in all TIN SHARES.
** SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS)
ON DEPOSIT OF TWENTY PER CENT.

RAILWAYS—SPECIAL BUSINESS.

FOREIGN BONDS—SPECIAL BUSINESS.

Fortnightly accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

**MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER.**
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES
AND MISCELLANEOUS SHARES of every description.
RAILWAYS, BANKS, FOREIGN AND COLONIAL BONDS.
TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.
Accounts opened for the Fortnightly Settlement
A Stock and Share List free on application.

MR. BUMPUS has SPECIAL BUSINESS in the undermentioned:—
100 Almada, 7s. 3d. 25 East Caradon, £23 1/4. 20 Richmond, £9 13s. 9d.
25 Asheton, 22s. 30 East Chiverton. 100 Rossa Grande.
50 Bodidris. 20 Marko Valley, 3s. 25 Ruby, £4 15s. 6d.
50 British United. 100 Flagstaff, 27s. 6d. 10 Roman Grav., £12 1/2.
40 Blue Tent, £2. 20 Frontino, £1 16s. 3d. 50 South Crebor.
2 Carn Brea, £54 1/4. 25 Great Holway. 30 South Darren, £23 1/4.
150 Chontales. 10 Great Laxey, £18 1/4. 15 South Frances, £10 1/2.
25 Colorado, 3s. 6d. 40 Hingston, 12s. 10 Tankerville, £26.
50 Clementina. 20 Herodsfoot, £23 1/4. 100 Tamar Silver-Lead.
5 Cape Copper, £23 8s 9. 50 Javali, 7s. 50 Tecoma.
55 Canada Gold. 25 Leadhills, £4 11s. 3d. 5 Van, £23 3/4.
100 Don Pedro, 14s. 6d. 20 Marko Valley, 3s. 40 W. Asheton, £23 5s. 6
40 Derwent. 15 Mellanear, £4 1/4. 20 Wheal Pevor, £20.
3 Dolcoath, £23 1/2. 25 New Quebrada, £23 3/4. 15 Wheal Grenville, £5
50 East Crebor. 150 Nouveau Monde, 22s. 20 W. Pateley Bridge.
15 East Van, £2 3s. 9d. 50 Parys Copper, 15s. 10 West Chiverton.
20 Eberhardt, £23 3s. 9d. 30 Pateley Bridge, 22s. 100 York Penin., (pref.)
10 East Lovell, 39s. 40 Panulicillo, £4 1/4. 20s.
100 Pestarena.

IMPORTANT TO INVESTORS.

Large profits may be realised by the purchase of SHARES in SOUND well-selected MINES at present prices. Many of these are likely to advance considerably in market value during the next few months.
Mr. BUMPUS devotes special attention to these Securities, and is in a position to afford reliable information and advice to intending investors and others.
The following Mines are particularly recommended:—Wheal Pevor, Wheal Grenville, Wheal Jane, West Pevor, Wheal Kitty, Drake Walls, East Lovell, Killifreth, East Caradon, Gunnislake (Clitters), Marko Valley, Derwent, East Chiverton, South Darren, Great Holway, West Asheton, and Panulicillo.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

A complete and reliable List of all the Leading Investments (published on the first of each month) may be obtained free on application to—
WILLIAM HENRY BUMPUS, SWORN BROKER.
OFFICES: 44, THREADNEEDLE STREET, LONDON, E.C.
BANKERS: THE NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

BEAZLEY AND CO., MINING SHARE DEALERS,
9d, NEW BROAD STREET, LONDON, E.C.,
RECOMMEND THE PURCHASE OF SHARES in the
NORTH D'ERESBY MOUNTAIN LEAD COMPANY
(LIMITED).

The BEST and CHEAPEST INVESTMENT now before the Public.
Copy of Reports of Special Surveys by several eminent Mining Engineers may be had on application.
The Mine is improving. See reports in this day's Journal. A large purchase of shares has been made this week on a private inspection.

SHARES BOUGHT AND SOLD AT NET PRICES FOR CASH OR ACCOUNT in the following and other MINES:—
Herodsfoot. Uny. Glenroy.
Parys. Basset. Mellanear.
East Caradon. Bedford. Hingston.
Marko Valley. East Lovell.

MESSRS. ENDEAN AND CO. are prepared to DEAL in the undermentioned SHARES, as follows:—
Llanrwst Ordinary... £ 7/6... £1 1/4
do 10 p. cent. Pref. 2 1/2... 2 1/4
WANTED, 700 BODIDRIS Shares, for cash, in one lot. State lowest price. Dealers and others wishing to buy or sell shares in the above will find it to their advantage to communicate with—
Messrs. ENDEAN AND CO., STOCK AND SHARE DEALERS,
85, GRACECHURCH STREET, LONDON, E.C.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C., strongly recommend shares in the LLANRWST LEAD MINING COMPANY (LIMITED), for a speedy and substantial rise in price. No mine in the Llanrwst district can equal it either as regards present value or future prospects. Shareholders in this mine will do well to average the cost of their shares by picking up every share they can get at 11, which is 50 per cent. discount. Those who have not yet taken any of the company's 10 per cent. Preference Shares should at once do so. We have recently had Llanrwst mine inspected by Mr. G. Barker, M.E. He states that without counting upon the lode in the 14 below adit, and on which he reported in 1877, there are 4050 tons of ore discovered, worth, at 12s. per ton, £48,600.

The ordinary shares are now to be had for 11. each. This is only 30,000l. for the mine. The preference capital issued is barely 2000l. The mine is, therefore, capable of returning 100 tons of lead monthly, and will doubtless do so. This will enable the company to pay the 10 per cent. due on its preference shares, and leave a balance which would enable them to pay 15 per cent. on the ordinary shares at their present price of 11. If there are any shareholders foolish enough to sell their shares for less, so much the better for those who are shrewd enough to buy them. The fact that 48,600l. worth of lead has been already discovered above the adit is in itself sufficient proof that the Llanrwst is a mine second in its prospects to no other in the United Kingdom.

NOTICE OF REMOVAL.

MR. PETER WATSON'S OFFICES
will in future be at—
18, AUSTIN FRIARS,
OLD BROAD STREET,
LONDON, E.C.,
Being larger and much more convenient Offices than at—
54, OLD BROAD STREET.

MESSRS. PETER WATSON AND CO.'S
BRITISH AND FOREIGN MONTHLY MINING NEWS
—STOCK AND SHARE INVESTMENT NOTES—MINES,
MINERALS, AND METAL MARKETS—SHARE LIST,
No. 812, VOL. XV., for NOVEMBER month, will be published
on WEDNESDAY next, and sent to customers on application.

Annual Subscription..... 5s. | Single Copy..... 6d.

MESSRS. PETER WATSON AND CO.,
18, AUSTIN FRIARS,
OLD BROAD STREET,
LONDON, E.C.

STOCK AND SHARE MARKETS.

Prices of STOCKS and SHARES in RAILWAYS, BANKS, ENGLISH and FOREIGN GOVERNMENT SECURITIES, GAS, MINES, INSURANCE, and other Stock Exchange Securities, and various important information forwarded on application to—
MESSRS. PETER WATSON AND CO.,
18, AUSTIN FRIARS,
OLD BROAD STREET,
LONDON, E.C.

UNITED STATES AND COLONIAL MINES.

IMPORTANT INFORMATION REGARDING THE ABOVE.
BUYER and SELLER of SHARES at the close Market Price of the day.
SHAREHOLDERS and INVESTORS may rely on all business being punctually and faithfully carried out.

A DAILY LIST OF PRICES sent (free) on application, either personally or by post. **BANKERS:** THE ALLIANCE BANK (Limited).

MESSRS. PETER WATSON AND CO.,
18, AUSTIN FRIARS,
OLD BROAD STREET,
LONDON, E.C.

MR. ALFRED E. COOKE,
DEALER at NET PRICES in EVERY DESCRIPTION of STOCKS and SHARES,
78, OLD BROAD STREET, LONDON.
ESTABLISHED 1853.

NORTH D'ERESBY MOUNTAIN LEAD.

For many weeks past these shares have been on the list of SPECIAL RECOMMENDATIONS. Lead is higher, and will probably soon be OVER £20 PER TON. The lode at No. 2 adit level is now worth 25 cwt. of lead per fathom. Those who know the situation of this No. 2 level will be able to judge of the importance of this valuation. Shares should be IMMEDIATELY PURCHASED at 20s. per share. NO FURTHER LIABILITY. THE CHEAPEST SHARE in the DISTRICT.

NOTE.—THE EXPENSES of any independent inspector will be REFUNDED should his report not agree with those favourable reports already made by eminent authorities.

ALL BUSINESS transacted FREE of commission.
SPECIAL BUSINESS in ALL TIN, COPPER, and LEAD SHARES at CLOSEST POSSIBLE PRICES.
STOCK EXCHANGE BUSINESS DONE ON BEST TERMS.

ALFRED E. COOKE,
78, OLD BROAD STREET, LONDON.
(Adjoining the Stock Exchange and Mining Markets.)

STOCKS AND SHARES,
FOREIGN BONDS, TELEGRAPHS, TRAMWAYS, RAILWAYS, AND OTHER LEADING SECURITIES.

MR. JAMES STOCKER, STOCKBROKER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1848.

SPECIAL BUSINESS in the following:—
Colorado. Flagstaff. South Frances.
Chontales. Herodsfoot. Tankerville.
Derwent. Grogwinion. Van.
Devon Consols. Javali. West Asheton.
Exchequer. Leadhills. West Chiverton.
Eberhardt. Last Chance. West Pevor.
East Chiverton Consols. Marko Valley. West Pateley.
East Lovell. Nouveau Monde. Wheal Crebor.
East Van. Pateley Bridge. Wheal Jane.
East Caradon. Parys Gravel. Wheal Pevor.
East Crebor. Richmond. Wheal Grenville.
Ruby. South Darren. Wheal Uny.

BANKERS: LONDON AND WESTMINSTER.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
25, BISHOPSGATE STREET, LONDON, E.C.,
Can SELL the following SHARES at prices annexed:—
30 Bedford United, 10s. 3 20 Herodsfoot, £2 2s. 6d. 100 Rossa Grande, 3s. 9d.
150 Cambrian, £1 18s. 6d. 20 Hingston, 11s. 6d. 20 Ruby Silver, £4 13s. 9d.
150 Chontales, 8s. 20 Leadhills, £4 11s. 3d. 25 So. Crebor, £1 5s.
25 Colorado, £1 1/4. 10 Minera, £1 1/4. 20 So. Darren, £2 12s. 6d.
20 Devon Consols, £2 15 40 Nouveau Monde, £1 1/4 50 Tamar Silver-Lead.
20 Don Pedro, 16s. 20 Morfa Du, 13s. 9d. 50 Tecoma, 6s. 6d.
20 East Caradon, £2 2s. 6 20 Panulicillo, £4 15s. 50 Van United and Glyn,
20 East Crebor, £1 5s. 20 Pateley Bridge, 18s. 14s. 9d.
25 East Lovell, £1 17s. 6 150 Pestarena, 6s. 15 W. Asheton, £23 1/2.
25 East Van, £2 1/4. 75 Port Phillip, 9s. 9d. 20 W. Chiverton, £2.
20 Eberhardt, £2 2s. 6d. 10 Roman Gravel, £12 1/2 20 W. Pateley Br., £23 1/4.

BWICH UNITED MINES—SPECIAL BUSINESS in these shares; also in BRYN GLAS SILVER-LEAD (Limited).

MR. W. B. COBB, 29, BISHOPSGATE STREET,
LONDON, E.C.
BWICH UNITED.—There is no mining investment on the market equal to this. I can strongly recommend the shares for a rise in price and dividends.
BANKERS: ALLIANCE BANK (Limited).

MR. JOHN L. M. FRASER,
(Fourteen Years at the Great Minera Mines)
CONSULTING MINING ENGINEER—SECRETARY AND AUDITOR—
ROYALTY AND MINERAL ESTATE AGENT—SHARE DEALER—
MINES, MINERALS, AND MACHINERY BROKER—
GREENFIELD HOUSE, WRECKHAM.

Specially recommends the following SOUND LEAD MINES for INVESTMENT and a GREAT RISE in price:—
BRITISH SILVER-LEAD. OEFN-Y-MAES.
PANT-Y-MWYN. PLAS DDU and PARK.
Splendid runs of lead ore have been discovered in each of them, and are open to inspection. Full particulars on application.

THE "DIFFERENTIAL" PUMPING ENGINE (DAVEY'S PATENT),

FOR
DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION,
SUPPLYING DOCKS, PUMPING SEWAGE, and GENERAL
PUMPING PURPOSES

HATHORN, DAVEY, AND CO.,
LEEDS.

HATHORN, DAVEY, and Co. have Patterns of "Differential" Engines of all sizes, from 5 to 500-horse power, and have facilities for supplying very powerful Engines and Pumps at a short notice.

See Illustrated Advertisement every alternate week.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING AGENT, AND STOCK AND SHARE DEALER,
10, COLEMAN STREET, LONDON, E.C.

"HOW TO TAKE ADVANTAGE OF THE COMING RISE IN PRICES,"
By ALFRED THOMAS, 10, Coleman-street, E.C.
Will be forwarded to Investors upon application.

MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON,
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

TO INVESTORS, SHAREHOLDERS, AND TRUSTEES.
SAFE DIVIDEND INVESTMENTS PAYING 4 TO 6 AND 10 PER CENT.
PER ANNUM ON PRESENT OUTLAY.

SHARP'S INVESTMENT CIRCULAR.
The DECEMBER EDITION (post free),
SHOULD BE CONSULTED BY INVESTORS AND SHAREHOLDERS.
It is a Reliable "Guide," giving valuable information and Sound Advice, &c.
It gives Market prices; Dividends upon outlay, when payable; Reports, &c., &c.
IT CONTAINS ALL THE SAFE INVESTMENTS IN THE FOLLOWING:—
English, Foreign Railways. Insurance, Gas, Waterworks.
Preference, Debenture Stocks. Colonial, Foreign Stocks.
Indian, American Stocks. British, Foreign, Colonial Mines.
Bank, Financial Shares. Tea, Land Shares.
Tramway, Telegraph Shares. Shipping, Dock Shares.
Municipal Bonds. Miscellaneous Shares, &c., &c.

HENRY GOULD SHARP, STOCK AND SHARE BROKER,
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.

BANKERS: LONDON AND WESTMINSTER, Lothbury, London, E.C.

FERDINAND R. KIRK, 5, BIRCHIN LANE,
LONDON, E.C.
FORTNIGHTLY ACCOUNTS opened, on receipt of the usual "cover," in Railways Home and Foreign, Mining Shares, Foreign Bonds, and certain Miscellaneous Securities.
"THE WEEK"—A SEPARATE EDITION from that which appears in the Mining Journal is published every Wednesday evening, containing "Notes and Hints on the Stock Markets," with Closing Prices. May be had on application.
BANKERS: LONDON AND WESTMINSTER, Lothbury.

**MR. E. J. BARTLETT, BRITISH AND FOREIGN STOCK
AND SHARE DEALER,** No. 30, GREAT ST. HELEN'S, LONDON, E.C.
SPECIAL BUSINESS in PEN-RY-ORSEDD. These shares should have a great rise. The sett is drained by the Halkyn Tunnel—rich course of ore proved—a great success. Pamphlet, with full particulars, will be forwarded on application, post free.

JUST OUT.
"HOW TO INVEST," post free, One Shilling, Thirteenth Edition, enlarged.

MR. CHARLES POWELL, 11, WARMFORD COURT,
THROGMORTON STREET, advises the PURCHASE of EAST CREBOR shares at £1 2s. 6d. to £1 7s. 6d. This is the adjoining mine, and on the identical rich lodes as Wheal Crebor, the shares in which mine have advanced during the last six months from 5s. to the present price—£7 15s. to £8 5s. It is not generally known that East Crebor has produced some of the richest yellow copper ore in England, one parcel of which realised the high price of £26 15s. per ton. Mr. POWELL has business in EAST CREBOR shares as buyer or seller.

MR. THOMAS THOMPSON, JUN., STOCK BROKER,
16, ST. SWITHIN'S LANE, E.C.

Mr. THOMPSON transacts business in every species of Stock Exchange and Mining Securities.
Mr. THOMPSON affords reliable information to investors, and can give, when desired, a list of first-class Stocks and Shares, yielding 4 to 10 per cent. dividends upon present prices.
Mr. THOMPSON'S weekly Circular may be had on application.

JOHN B. REYNOLDS, STOCK AND SHARE DEALER,
37, WALBROOK, LONDON, E.C.
ESTABLISHED 20 YEARS.—BANKERS: LONDON AND SOUTH-WESTERN.
Confidential enquiries quickly answered. Telegrams promptly attended to.
Close prices and accurate intelligence may be relied upon.

MR. JOHN RISLEY, STOCK AND SHARE BROKER,
38, CORNHILL, LONDON, E.C.
ESTABLISHED 20 YEARS.
LEAD ERA, EAST CARADON, EAST CREBOR, and PARYS CORPORATION shares specially recommended.

Reliable information on all Mines obtained for clients.

MESSRS. JONES AND HOUSTON, 25, CROSBY HALL
CHAMBERS, LONDON, E.C.,
STOCK AND SHARE DEALERS.

PENNINGTON AND CO., SWORN BROKERS,
3, ROYAL EXCHANGE BUILDINGS, E.C.,
Transact business in every description of Stocks and Shares.
ESTABLISHED 1860.—BANKERS: ALLIANCE.

MESSRS. EKINS AND CO.,
STOCK AND SHARE DEALERS,
14, QUEEN VICTORIA STREET, LONDON, E.C.
BANKERS: METROPOLITAN.

MR. W. TREGELLAS, 19, BISHOPSGATE STREET
WIDIN, E.C.,
Deals in all descriptions of MINING SHARES at close market prices, and is always in a position to do business in the SANTA BARBARA and other Brazilian Gold Mines.
The latest reports as to their progress and profits of the different concerns can be seen at his office.

WHEAL CREBOR—EAST WHEAL CREBOR.
WHEAL CREBOR.—The forthcoming sale of copper will give a very large profit—much larger, in fact, than was estimated at the meeting. The mine is certainly looking splendid, and the shares will most assuredly go higher. The lode in the 120 west has now improved to £30 per fathom, and the shares have had a further considerable advance. Our Tavistock correspondent writes us:—"Shares will soon go to £12 per share, and if Crebor continues for a few months longer to open up as it is doing shares will go over £20." We are BUYERS of any number at the market price.
We again call special attention to EAST CREBOR. These shares are being steadily purchased for investment, and large transactions have taken place this week at higher prices. It will be noticed that the best ore ground in Crebor is going in the direction of East Crebor. Shares should be bought. We are BUYERS of 500 Shares at the current quotation.
Sellers of Crebor or East Crebor are requested to apply at once to us.
JAS. SCOTT AND CO., PALMERSTON BUILDINGS, CITY

LADY ASHBURTON SILVER MINING COMPANY (LIMITED),

Near CALLINGTON, in the County of CORNWALL,

Incorporated under the Companies Acts, 1862, 1867, and 1877.

£30,000 (30,000 £1 Shares) being the Capital of the Company.

Payment, £1 per share on application. No further liability.

Should no allotment be made the application money will be returned in full.

DIRECTORS.

B. J. COWELL HELDEN, Esq., F.L.M.A.S., 68, Pall Mall, S.W.
—CHAIRMAN.

Lieut.-Colonel C. G. PERCEVAL, 23, Queen's-terrace, St. John's Wood, N.W.

A. STRONGE GILBERT, Esq., 13, Grafton-street, Piccadilly, W., and Richmond, Yorkshire.

Major BIRCH, Clarges-street, Mayfair, W.

EDWIN CARTER, Esq., M.E., 85, Gracechurch-street, E.C.

BANKERS—LONDON AND SOUTH-WESTERN BANK (Limited),
Fenchurch-street, London, E.C.

SOLICITORS—Messrs. STACPOOLE AND SON, Pinner's Hall,
Old Broad-street, London, E.C.

BROKER—F. K. BLANCH, Esq., 80, Old Broad-street, London, E.C.

AUDITOR—Mr. RICHARD MITCHELL, 7, Union-court, Old Broad-street, London, E.C.

SECRETARY—Mr. J. J. STANSFIELD.

OFFICES,—10, BUSH LANE, LONDON, E.C.

The object of the company is to purchase and fully develop the silver lodes and others laid open in a portion of the Ashburton property, in the parish of Callington, in the county of Cornwall, the grant being secured in the usual way by a lease for the customary term of 21 years, subject to the payment only of one-twentieth dues.

It commands half-a-mile on the course of the lodes from east to west, and about the same in a contrary direction, affording scope for opening out the lodes very extensively, and to a greater depth than mining explorations have ever yet reached. Moreover Calstock Quay, on the navigable River Tamar, not being more than two miles distant, if so much, ensures very inexpensive carriage of the ores thereto for shipment to market, and of materials back for working requirements; giving the mine an appreciable positional advantage.

The various trials made, besides saving the company much time and money, are very important; firstly, on account of having led to a most valuable discovery, one lode having already produced silver ore of the value of £134 per ton at only a few fathoms from the surface; secondly, on account of affording correct guidance in opening out the mine in the most expeditious and advantageous manner possible; thirdly, on account of showing the character, size, lineal course, and declination of the lodes; and fourthly, on account of proving that there are no less than five lodes within the limits of the grant, which is very important, as the success of the Lady Ashburton Mine is not dependent on the eventualities of one lode only, as some mines unfortunately are.

That the lodes have been under powerful mineral influence will be readily understood by the extracts from reports, which express the opinions of mining advisers of reliable sound practical judgement. Their statements and opinions irresistibly lead to the conclusion that there is a very rich silver mine to be soon opened out in the Lady Ashburton Grant.

Judging from and relying on, the statements and opinions of the authorities referred to, which no doubt had much careful consideration before being advanced, it is to be confidently expected that the district spoken of, and more particularly the Lady Ashburton Mine, will soon be very prominently before the mining world.

Further particulars or applications for shares to be made to either the bankers, broker, or secretary.

SELF-ADJUSTING STONE DOG.—Masonry without lewis has usually been considered impossible, yet Messrs. Selig, Sonnenthal, and Co., of Lambeth Hill, E.C., are now introducing what appears to be an excellent substitute. The advantages claimed for the dogs are that they adjust themselves to the stone at once, that lewis holes are dispensed with, and consequently the breaking out of lewis avoided, and that no holes are required as with the old kind of stone pincers. The new dogs consist of a series of jointed levers, so arranged that the holding blocks can be placed on the opposite sides of the stone whatever may be the size of the block, and when the power is applied to the hoisting chain the grip increases in proportion to the weight of the stone to be lifted. Being made of steel they are light and durable, and there is nothing complicated to get out of order. The dogs are equally applicable for use in quarries, railway stations, building, and lifting stone generally. From the facility with which dressed stone can be hoisted and set without any fear of breaking the corners or damaging the surfaces the new dog is likely to come largely into use.

HAND-POWER CIRCULAR COLD-SAWING MACHINE.—The utility of a hand-power machine adapted for cutting iron or steel rails, and any other kind of rolled iron, steel, or metal, will be generally admitted. The hardest steel rails are readily cut without subjecting them to any blows or jars; and, as it is easily portable, a single machine will suffice for many places. It may well be assumed that it is not only a useful tool for the station or along the line where new rails are being laid, to cut fitting pieces to length. Compared with the present methods employed for cutting rails with a chisel, and ultimately breaking them, this machine possesses both the advantage of a cleaner and more accurate cut, and also of a saving in time; but it was principally with a view to meet the difficulty in cutting cast-steel rails, which are being daily more extensively used, that this machine was constructed. For cast-steel rails it is an absolute necessity that the operation of cutting should be carried out without violence, as this may easily cause fractures, and lead to serious results. Any danger arising from fracture is, of course, entirely avoided by the use of this saw, and the work is done more rapidly; indeed, it is guaranteed that two men will easily cut a standard rail, even of the hardest cast-steel, in twenty minutes. A removable drilling arrangement to drill a fish-plate hole in 2½ minutes, and a milling cutter to notch a rail in ¾ minute. A similar machine is being introduced by the same firm—Messrs. Selig, Sonnenthal, and Co., of Lambeth Hill, Queen Victoria-street—adapted to steam-power, the two striking features of which are that the construction of the independent table under the saw offers special facilities for fixing the material to be cut in any position, and all bevelling and skewing can, therefore, be cut with this saw, which, moreover, it is claimed works quicker than any other, because the amount of feed is not regulated by mechanical means, and is constantly equal, but adjusts itself automatically to the amount of cut by means of a weighted lever, feeding the saw quicker to its work where the section is small, and reducing the amount of feed in larger sections; the saw thus removes an equal amount of metal in a given time. The oscillating lever carrying the saw can be fixed at different angles and heights, and the advantages of working metals cold, as compared with manipulating them when hot, are too palpable and too well known to require special enumeration here; it may, however, be observed that even when cutting square and round bars of from 2 to 3 inches the saving both in time and expense is very considerable. These bars can be cut in the time it would take to only heat them. Two men are necessary to cut bars with a chisel when hot, while one man can easily cut them with a saw when cold in less time, and even not considering the coal used for heating. A cold saw cut leaves the iron in a perfectly finished condition, requiring no such work as filing the end true and level. These saws appear altogether well adapted to the purpose intended.

Vice-Chancellor Sir R. Malins has appointed Mr. Alfred Andrey Broad (Broads, Paterson, and May) provisional official liquidator of the Wreck Recovery and Salvage Company (Limited).

HOLLOWAY'S PILLS.—The change of temperature and weather frequently upset persons who are most cautious of their health, and most particular in their diets. These corrective, purifying, and gentle aperient pills are the best remedy for all defective actions of the digestive organs; they augment the appetite, strengthen the stomach, correct biliousness, and carry off all that is noxious from the system. Holloway's pills are composed of rare balsams, unminged with base matter, and on that account are peculiarly well adapted for the young, delicate, and aged. As this peerless medicine has gained fame in the past, so will it preserve it in the future by its renovating and invigorating qualities, and its incapacity of doing harm.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES*—No. CXL.

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,

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(Formerly Student at the Royal Bergakademie, Clausthal.)

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METHODS OF WORKING WITHOUT ATTLE PACKING.

PILLAR WORKING.

The general practice of diagonal pillar working in South Wales is to open out the seam by means of a pair of main levels from the shaft or the side of the hill, and accessory levels driven every 40 to 50 yards apart. From these levels the stalls (about 6 yards wide) are driven, so as to rise 24° (or about 1 in 24), leaving pillars upwards of 10 yards thick. The pillars are thirled about every 15 yds., the slit generally being of the same width as the stalls. The slits, however, are driven so as not to come opposite each other, and the stalls are set off on the rise side of the levels, opposite the pillars on the low side of the levels. This is to avoid large open places, at which the roof might readily break down. From one-half to two-thirds of the coal is got by stall work. The pillars are thus left so small that when they have been worked away to a certain extent a crush must ensue, so that in this arrangement there is a palpable and definite loss of coal in pillars.

When the inclination of the seam become greater than 15° the use of diagonal pillar working is out of the question; and if pillar working is the best method of getting the seam one will only have the choice of strike pillar working, or what we have called rise pillar working. Of this latter two or three examples will suffice, since we shall afterwards meet with it in combination with longwall.

The Beust seam, in the Saarbrücken district, which dips at an average from 10° to 15°, is opened out by pairs of levels driven 100 yards apart. Each of a pair of levels are driven so as to leave a pillar 10 yards thick between the levels; the lower level in each pair is used as the main road for conveyance. The main headings, driven on the full rise of the seam, to connect the levels together, have a safety pillar 35 yards thick left on each side of the heading. From the low level headings are driven to the rise every 24 yards apart. When these headings have been driven (10 yards) through the pillar to the upper level, the headings are widened on one side, so as to make the full width 4½ to 5½ yards, and are continued forward in this full width to the low side of the safety pillar left to protect the next pair of levels above. Sometimes the heading is widened to 12 yards, in which case the excavated space is partially filled with properly packed gobbin, so as to leave a roadway on each side of the packing. When the headings have advanced to their full extent to the rise the pillars left between the heading, which in the first case will be from 18½ to 19½ yards in width, and in the second case 12 yards wide, are worked away down hill, either by slicing off the pillar in successive ribs, or by working on the face of the coal.

In the North of England, more especially in Yorkshire and Derbyshire, "rise" pillar working is often employed, under the name of "bank work." The following is a general description of this mode of working. The seam is usually opened out by a pair, or in more modern pits by three, levels from the shaft, driven about a ½ chain apart, centre to centre. To the rise and dip of these main levels safety pillars are left from 1 to 1½ chain thick. From these main levels main endings are set off at suitable distances to the rise and dip, and from these accessory pairs of levels are set at suitable distances apart. A safety pillar, 1 chain thick, is usually left to the rise and to the dip of the accessory levels. From the covering off levels, which form the rise side of the safety pillars, to the rise of the various levels, the banks are started about 1 chain in width, and driven on the full rise of the seam. In order to keep the roads or gates open a pack wall is built on both sides of the bank, about 5 ft. from the solid coal or pillar, thus leaving a gate road 5 ft. in width on both sides of the bank. The gate roads have thus solid coal on the one side and a pack wall on the other. The banks, or stalls, are usually started so as to leave the pillars 1 chain thick; these are worked out backwards when the banks have reached the rise boundary, the same gate roads serving for the conveyance of the coal when working out the pillars. The face is protected by two rows of timber. Two miners work the coal on each side of the bank (or pillar, as the case may be), the rails being brought along the face as the fall, or undercut, is got off. One side of the bank face generally leads the other by about 5 or 6 yards. Bank work, or "rise" pillar working, has the great disadvantage that the gas has a tendency to make its way to the working faces, or to the rise side of the goaf next the working face; and since the current on making its exit from the bank, or stall, has to descend again to the air level, some difficulty is experienced in dislodging the gas. When the stalls have reached the boundary, and the pillars have been worked through at the upper end, this disadvantage no longer exists, as the pillars are being worked out. This mode of working generally effects a pretty complete exhaustion of the whole amount of the coal; the only loss of coal is in working back the pillars. The most troublesome portion is the working out the pillars, which have goaf on both sides, and consequently suffer sometimes considerably from the pressure. When the pressure begins to act during the working out of the pillar, so as to cause the roof to lighten and break down, this often results in cutting up the roof over the gate roads close to the solid side of the pillar, owing to the fact that the pack walls support really but little weight until first compressed. In order that a larger proportion of coal should be got in the stall or bank working, it is usual in many cases to drive the stalls 2 chains wide, leaving the pillars to be brought back only 1 chain thick, with the result that the pillars being much thinner can be worked back more rapidly. In choosing this method of working, by which a great amount of strait work is avoided, it is of great importance properly to proportion the distance between two adjoining pairs of levels; or, what comes to the same thing, the amount by which the stalls are driven forward before the pillars are cut through to be brought back again. If the distance be too short a greater number of levels will be required over the same area, and a greater amount of coal left as safety pillars, the loss of coal in getting which is usually much greater than working away the ordinary pillars, besides furnishing proportionately more small coal. If the length by which the stalls are advanced is set out too great the roof of the roadways, or bank gates between the solid coal and the pack walls, cuts up, causing the roof to fall in, in some cases completely blocking up all access along the bank gate to the face, and that before the bank face has advanced the requisite distance. In such a case the ventilation is seriously affected; the bank face must then be reached by driving strait work through the pillar, or by driving strait work from the levels to the rise of the bank, and this will then entail the additional disadvantage of the transport from the bank face to the nearest main road, being up hill.

When the working face is advanced on the full rise of the seam, the coal being got in falls 3 ft. to 4 ft., it becomes necessary to lay the tramroad close to the coal, following the fall as it is being got off towards the centre of the stall. The tramroad is laid between the first row of props and the face of the coal. The actual width, therefore, from which the men can fill the corves is limited to 3 ft. or 4 ft., the depth of the fall, or undercut. As most skillful miners will often blow down enough coal at a time to fill 20 or 30 corves, they cannot proceed to other work until the coal is filled in. It will not always be convenient to let the men leave the corves as fast as they can fill them, without causing some of the miners in the other banks to have to wait for corves. And again, when all the coal is filled the miners will not fill any more corves until the next length of 7 or 8 yards is undercut.

To avoid this irregularity the following modification of the "rise" pillar and stall working is used. The bank or stall gates on both sides are carried forward from 9 to 10 yards in advance of the coal face as strait work, which is then widened out towards the stall, to

admit of the pack wall being built. The coal is then worked away in 8 or 9 yard slices at right angles to the bank gate, a pack wall being carried along parallel to the face of the coal (at right angles to the bank gate), at a sufficient distance to leave room for a tramroad to the 9 yard face, the coal from which can be filled from the whole length of the face at once, so that the miner can commence undercutting in any portion of the face as soon as the coal has been filled up from that portion of the face. This method necessitates extra expense in strait work, but allows of each miner sending out proportionately more coal, and consequently of raising the output from a given area.

COMBINED PILLAR AND LONGWALL WORKINGS.

From our last descriptions of rise pillar workings it will be evident that if the thickness of the pillars is greatly increased and the width of the stalls proportionately diminished during the getting of the pillars, especially if the latter are worked across the whole width or thickness as the working face, the workings will greatly resemble the longwall, whilst partaking of the character of pillar working. Such workings are called in Germany combined pillar and longwall workings, which shows that in modes of working extremes sometimes meet. The first example that we shall give refers to the workings in the Buest seam, near Saarbrücken, which, as we have mentioned above, is from 6 ft. to 8 ft. in thickness, and dips at an average of 10° to 14°. The stalls were driven 11 yards wide and 55 yards apart, thus leaving pillars 44 yards in thickness. The dirt partings and that portion of the roof which falls in during the driving of the stalls is packed in such a manner that on one side of the stalls a road is formed sufficiently wide to admit of two pair of rails being laid down, and on the other side the road is just wide enough to form a convenient travelling road. The tramroad is fitted up at the top end with a small portable brake, and so forms a jig brow on a small scale. This jig road is continued through the safety pillar on the low side to the level. In some cases, instead of driving a stall 11 yards wide, a pair of headings are driven enclosing a 10 yard pillar between them, which is thirled as often as is requisite for ventilation. At the upper ends of the stalls (in which they have been driven to the low side of the safety pillar to the rise) the pillars are worked out in 9 yards to 11 yards slices from both sides of the stalls (and consequently from both sides also of the pillars) towards the centres of the pillars. When driving the first slice or rib the gobbin is packed on both sides so as to leave a road along the top side and along the lower side. The ventilating current thus ascends up one side of the travelling road of the stall, passes along the low road to face of the rib up the face of the rib to the road on the top side, along which it passes to the face of the rib on the opposite side of the stall down this face to the lower road, and along this to the stall gate and down the opposite side jig road of the stall to the main or covering off level. As the pillars are worked through at the upper end of the stalls the air current traverses along the faces of the coal, ascending up the first stall gate in that set of workings, and first descending to the main return air level from the last stall. As the pillar is sliced off in successive slices or ribs 9 yards to 11 yards thick a pack wall or a close row of timber is carried on the low side to keep the corf road open along the face of the coal to the face of the rib being sliced off, the face of the latter being usually protected by two or three rows of timber, the back rows being robbed and reset closer to the face as the face advances.

THE SYDNEY INTERNATIONAL EXHIBITION—No. III.

[FROM OUR SYDNEY CORRESPONDENT.]

The mineral exhibits of Tasmania are admirably represented, the Commissioners, Mr. P. A. Jennings, C.M.G., and the energetic secretary, Mr. D'Avigdor, having made the most of the small space in the southern end of the eastern annex allotted to them. The first thing that attracts the attention is the handsome tin trophy shown by the Hobart Town Tin Smelting Company, and designed by Mr. R. Harvy, their engineer. It contains nearly 6 tons of block tin, is stacked in an artistic manner, and is suitably ornamented with "tools of trade" used in the first instance to raise the ore. The Court is rich in minerals of various kinds, but its chief display in this section is decidedly tin. The celebrated Mount Bischoff Company show interesting sections of wash-dirt from the different faces now being worked in their mine, some of the coarse wash-dirt containing half ore. There are also some monster tin ore "nuggets," weighing up to as high as 100 lbs. Samples of tin ore in porphyry crystal quartz, in conglomerate and in chlorite are also shown, as well as the dressed tin ore in all stages as it passes through the "jiggers." Some fine specimens of golden quartz are also shown, the assay of which gives a high percentage of gold. Samples of stream tin are shown from the Rising Sun Company, the Emu Company, Eve Company, and Union Company, all at George's Bay; also from the Weal Tasman Company, Gould's Country, and from the Waverley Company and Atlas Company at Thomas's Plains. Lode tin is shown by the West and North Bischoff Company, and from the Cumberland Company on the West Coast. In order to show the locality of the various minerals, an excellent mineralogical map of the island has been prepared by Mr. Dagobert Lewald, the Government analyst, who also contributes much valuable information about the quality of the minerals shown. Samples of coal are exhibited from the Sandfly ranges, near North-west Bay, from the Gardener's Bay Mining Company, from the Enterprise Mine, Newtown, from Adventure Bay, Brunel Island, from York Plains, from Jerusalem, and from Green Point, Port Cygnet. Copper is represented by samples from Dalley's claim, Beaconsfield, from Badger Head, from Mount Morris, and from the Meredith Ranges. Antimony ore from Mount Bischoff is exhibited by the Hon. J. S. Dadds, M.H.A. Specimens of iron ore, manganese, limestone, marble, slate are also shown, and a large number of these exhibits are arranged in cabinet by Messrs. Dagobert, Lewald, and Alfred J. Taylor, and are shown by the southern commissioners.

The many handsome skins which, made into useful and ornamental articles, adorn the side and eastern end of the Court show that the island must be a perfect paradise for furriers. Mr. Joseph Omant, of Elizabeth-street, is a large exhibitor of furs. He shows handsome rugs of black opossum tails, native cat skins, black opossum skins, hearth-rugs of opossum tails, and carriage-rugs of skins. Mr. Omant has also many handsome furs made up for ladies' wear, such as ladies' jackets of silver-grey opossum, of ringtail opossum tails, and "sets" of furs. Mr. S. Burrows, of Risdon, shows rugs and sets of furs of various kinds; and Mr. Simon Arnett, of Rothwell, well-dressed skins of 17 kinds of furred animals, who have their habitat in Tasmania.

The forest products of the island are exceedingly well represented, the Royal Society of Tasmania having sent polished veneers of the following wood:—Plain and figured gum, cherry, wattles, myrtles, pear, box, peppermint, musk, laurel, and blackwoods. Mr. C. A. Glover, of Franklin, sends Huon pine musk, waratah, hickory, myrtle, and westringia. Mr. Thomas Stephens, of Holbrook Place, sends polished slabs of ironbark, scented wood, pencil cedar, and King William pine; while Messrs. J. Henry and Co., of the Don, send a splendid slab each of Pleman River pine and blackwood, 6 ft. by 10 in. Railway sleepers of blue gum, shown by Mr. Thomas Oates, of Huon, and of stringy bark, by Mr. Joseph Graves, Southport, are likewise exhibited. Messrs. Grubb Bros., of Hobart Town, show wattle bark for tanning purposes in three stages of its preparation.

HOT MINERAL SPRINGS AT TEPLITZ.—Since the sudden disappearance of the Teplitz water last year, when, as will be recollected, the spring had been inadvertently tapped and drawn off into some of the neighbouring coal mines, the municipal authorities have not ceased to devote their attention to the question, with a view to preserve to the town that which is the mainstay of its prosperity, and even of its very existence. In the spring of this year a shaft was sunk to a depth of 15 metres at the old spring, and in this shaft last week the work of boring was commenced and will be continued till a depth of 60 metres has been reached. The rock is of very hard porphyry, and the progress hitherto has been very slow. In addition to this, operations, in accordance with a resolution of the municipal council, are to be commenced at another spot, and the boring is to

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergstrath Dr. VON GÄNNER, Director of the Royal Bergakademie, Clausthal, the Harz, North Germany.

be carried, if necessary, to a depth of 500 metres. It is intended to complete the work before the opening of the next summer season.

GEOLOGICAL SOCIETY OF LONDON.

Dec. 3.—HENRY CLIFTON SORBY, F.R.S. (President), in the chair.

Syed Ali, B.A., Hyderabad, Deccan, India; Wynne Edwin Baxter, High-street, Lewes, Sussex; Arthur Robert Boyle, Engineers' Office, Lime-street Station, Liverpool; Rev. John Lowry Carrick, M.A., Spring Hill, Southampton; Prof. Edward Waller Claypole, Antioch College, Yellow Springs, Ohio; Rev. T. Down, Newlands-terrace, Bootle, Liverpool; Rowland Gascoyne, Mexborough, near Rotherham; George M. Henty, Georgetown, Colorado; John Marshall, F.R.S., Albion-place, Leeds; Josiah Martin, Three-Kings College, Auckland, New Zealand; Charles Maxted, Providence Cottage, Well-road, Hampstead; Edward Provis, M.A., Worcester-street, Bromsgrove; Thomas Wm. Rumble, East Hill, Wandsworth; Rev. John Reuben Taft, St. George's, Wolverhampton; Octavius Albert Shrubsole, Reading; Samuel Richard Smyth, Blenheim-terrace, Old Trafford, Manchester; and William Neish Walter, Hillpark-terrace, Newport, Fifeshire, were elected Fellows of the Society.—Edward Bagnall Poulton, Jesus College, Oxford, was proposed as a Fellow; and Prof. A. E. Nordenskiöld, Stockholm, and Prof. F. Zirkel, Leipzig, were proposed as Foreign Members of the Society.—James Booth, the Grange, Owendun, Halifax; P. N. Bose, B.Sc., Colville-square; Edgar S. Cobbold, Chasewood Lodge, Ross, Herefordshire; D. M. Ford Gaskin, Town Hall, St. Helens, Lancashire; John Farran Penrose, Parkhenver, Redrath, Cornwall; Stephen Seal, Coxbench House, Darfield, near Barnsley; Thomas Tate, Rushton Villas, Thornbury, Bradford, Yorkshire; and Richard Taylor, Marske-by-the-Sea, will be balloted for as Fellows of the Society.

The following communications were read:—

1.—"The Gneissic and Granitoid Rocks of Anglesey and the Malvern Hills," by C. Callaway, M.A., D.Sc., F.G.S.; with an Appendix on the Microscopic Structure of some of the Rocks, by Prof. T. G. Bonney, M.A., F.R.S., Sec. G.S.

2.—"Petrological Notes on the neighbourhood of Loch Maree," by Prof. T. G. Bonney, M.A., F.R.S., Sec. G.S.

3.—"On some undescribed Comatulæ from the British Secondary Rocks," by P. H. Carpenter, M.A., Assistant Master at Eton College.

The next meeting will be held on Wednesday, when the following communications will be read:—1. "Contributions to the Physical History of the Cretaceous Flints, by G. C. Wallich, M.D.: communicated by the President.—2. "Undescribed Fossil Carnivora from the Sivalik Hills, in the Collection of the British Museum," by P. N. Bose, B.Sc.: communicated by Prof. J. W. Judd, F.R.S., F.G.S.—3. "On the Portland Rocks of England," by the Rev. J. F. Blake, M.A., F.G.S.

MANCHESTER STEAM USERS' ASSOCIATION.—At the last monthly meeting of the Executive Committee of this Association, held on Friday, Mr. Hugh Mason (president) in the chair, Mr. Lavington E. Fletcher, the chief engineer, presented his report, which gave particulars of visits of inspection and a record of boiler explosions from Sept. 27 to Nov. 21 inclusive. Mr. Fletcher had seven explosions to report, by which 11 persons were killed and 32 others injured, five of those explosions emanating from steam boilers and two from kiers. Not one of the boilers or kiers in question was under the inspection of this Association. These explosions, the report says, arose from the simplest causes, and would have been prevented by competent inspection, and the exercise of ordinary care. An explosion took place at Halifax which, the report says, raises the question whether the application of the principle of joint-stock insurance to steam boilers is correct. The boiler, which had been insured since it was laid down in 1871, had not received an internal examination for more than four years; and although the boiler was malconstructed and was tearing itself to pieces little by little every day it was in work, the owners receiving no warning of the danger and considered the boiler perfectly safe till it burst, killing one of the partners, the manager, and four of the workmen. Every boiler should be examined internally and in the flues once every year, and it is very generally supposed that insurance companies will inspect boilers insured with them, in their own interest. But this idea is fallacious. A joint-stock company is formed for the purpose of profit and not for philanthropy, and it actually costs more to make competent inspections than it does to let boilers burst and pay compensation. Further, when an explosion occurs and compensation is made, the wrong party in too many cases gets the money. If the injury were only to the owner or his property, it would be right for him to receive the compensation; but, as a rule, those who suffer personal injury are the outside public or the servants engaged in the works, and they are not included in the contract. Under these circumstances it would seem to admit of question whether the principle of insurance, as applied by joint-stock companies to steam boilers, meets the requirements of the public safety. The jury in their verdict on the Halifax explosion stated that "they were of opinion that some efficient action should be taken by the Government to compel the various insurance companies who undertake the insurance of steam boilers to insist on a periodical inspection of all boilers and fittings under their care." The Manchester Steam Users' Association has long considered that governmental interference for the prevention of steam boiler explosions is called for in the interest of the public safety. At the same time the Association is no advocate for Government inspection.

FOREIGN MINING AND METALLURGY.

Notwithstanding the depression which prevailed during the greater part of the year ending Aug. 31, 1879, the Ougrée Collieries and Blast-Furnaces Company contrived to realise a profit of 13,029l. during the twelve months. This result was due to the mines and improved tools and appliances owned by the company. The Austro-Belgian Metallurgical Company realised a profit of 6764l. during the financial year ending June 30, 1879. This balance did not admit of the payment of a dividend upon the share capital of the company. The current financial year is expected by the Council of Administration to yield better results. We should have noted the fact that the Ougrée Company pays a dividend of 12s. per share for 1878-9.

Prices of iron of most kinds continue to advance in Belgium, and trade circulars generally point to a still further enhancement in quotations. The Phoenix Company at Châtelineau has now brought all its productive appliances into full operation. This company expects to produce 1100 tons of tin-plates per month, and it has now work assured for the whole winter. The Couillet Company is credited with an intention to establish steelworks; if the announcement should prove correct there will, after all, be nothing very astonishing in the fact. We say this because the Couillet Company possesses very extensive mineral workings in the Grand Duchy of Luxembourg as well as the Marcinelle and Gouffre Collieries. With their nine centres of extraction, to say nothing of rolling-mills, blast-furnaces, and construction workshops, even during the most difficult period of what we may happily term the late industrial crisis the Couillet Company always contrived to realise a profit of from 12,000l. to 16,000l. per annum. Stocks of pig in the Charleroi Basin are stated to have considerably disappeared; it is not very long since these stocks amounted to 80,000 tons. The Belgian works are so overdone with orders that at a recent adjudication for a small quantity of steel rails at Amsterdam no Belgian firm submitted a tender.

Everything has tended to an increase in the extraction of coal in Belgium. Intensely cold weather has increased the demand for domestic qualities of coal, while important orders which have reached the rolling-mills and glassworks have led to numerous transactions in industrial coal. The canals are frozen, and coal can accordingly be moved by railway; the moment this is the case complaints begin to arise with respect to the deficiency of rolling stock, and the present time has been no exception to the general rule. No advance is expected to take place in coal in Belgium, however, until January—that is, no decided or general advance; this is due to the fact that many collieries are still engaged upon old contracts which they have no alternative but to work out. A contract will be let in June, 1880, for the enlargement of the canal from Charleroi to Brussels.

The Epina Collieries Company has just held its annual meeting

for 1878-9. The meeting decided that in consequence of the large stocks of coal undisposed of at the close of the last exercise it was desirable not to divide any of the realised profits of the year. The Blazy Mines Company realised in its financial year ending July 31, 1879, a net profit of 64,474l. A dividend at the rate of 12 1/2 p. per share absorbed 54,000l. of this sum, leaving 10,474l. to be either added to the reserve fund or to be carried forward to the credit of 1879-80. Of the dividend declared for 1878-9 11 p. per share has been already paid, leaving 16s. per share to be distributed on May 1, 1880. In consequence of the rigorous weather which has prevailed of late in France business in coal has become decidedly more active. The Anzin Company has established in Paris depôts for the sale of coal retail, and these depôts are working satisfactorily. The improvement recently noticed in industrial coal upon the Paris coal market appears to have become more decided. In the Nord and the Pas-de-Calais the abundance of orders has induced hopes of an advance in prices, but these hopes have not been realised at present. This disappointment is attributed to Belgian competition.

At a recent meeting at Pittsburgh of the American Institute of Mining Engineers, Mr. John A. Church reviewed at some length the effects of heat on the miners working in the Constock mines. In several instances the miners have been fatally scalded by falling into water rising from subterranean springs at the temperature of 158° Fahr. Mr. Sutro, the originator and engineer of the Great Sutro Tunnel, lost all power of volition by being exposed to a temperature of 110° Fahr., and numerous cases of insanity and death are reported as due to the heat to which the men have been exposed at 1700 ft. level.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week the markets have been quiet, as purchases are checked by the approach of the fortnightly settlement and the holiday season that will soon be at hand. The Board of Trade Returns for the month of November have been issued, and show the improvement in business was making great progress then. The improvement in the export trade is still mainly due to American purchases, especially of iron and steel goods; but it is evidently growing, because instead of, as hitherto, being confined to the cheaper kinds of iron, it now includes almost every description, while the increased exports to the East confirm the belief that trade with those quarters is also improving. With such good prospects for trade, we consider any temporary halt or backward movement in prices ought to be the investor's opportunity.

In shares of coal and iron companies the movements for the week comprise advances of 4l. per share on Shotts Iron, 1/4s. on Bolckow, Vaughan, A. D. on Cairnbarrow, and 2s. 6d. each on Scottish Australian and Steel Company of Scotland; while Nant-y-Glo and Blaenau (pref.) are reduced 1/4 p. per share; Ebbw Vale 7s. 6d.; Monkland (pref.), 6s. 3d.; Glasgow Port Washington, A. 5s.; Chillington, 3s. 9d.; Benhar and Marbella, each 2s.; and Omnia and Cleland, 1s. Benhar were dropping at one time, and a small quantity sold at 42s. 6d. on fears of a miners' strike; but after difficulties seem to have arranged now, and prices are rising. The wages question has also been affecting the prices of pig-iron; but the prospects of the spring trade with America and the Continent are so encouraging that buyers will require to watch, in case prices run up again. The meeting of the Nant-y-Glo and Blaenau Company has not been very favourable, and shares are more offered. Rhymney ordinary shares have been firmer on proposals to redeem the debentures as they fall due by issuing preference shares. Andrew Knowles and Sons are at 85s. dis.; ditto (fully paid), 49; Bilbore Iron, 19; ditto 6 p. cent. (pref.), 25; Bolckow, Vaughan, A. 74 1/2 to 75 1/2; ditto, B. 33 1/2; ditto (stock), 12 1/2; and ditto (pref.), 20s.; Chillington, 86s. 3d. to 88s. 9d.; Cardiff and Swansea, 85s. Clyde Coal have sold between 73s. 6d. and 75s.; Ebbw Vale, 8 1/2 to 8 3/4; Great Western, 65s.; ditto (pref.), 80; Hamstead, 11 1/2 dis.; John Brown and Co., 14 dis.; John Bagnall and Sons, 27s. 6d.; Mersey, 47s. 6d. dis.; Muntz's Metal, 15 1/2; Marbella, 45s. to 49s.; Monkland, 59s. to 63s.; ditto (pref.), 61 3/4 to 61 1/2; Newport Abercrombie, 1 1/4; Nant-y-Glo and Blaenau (pref.), 23 1/4 to 24; Omnia and Cleland, 21s. to 22s.; Parkgate, 40s. dis.; Pelsall, 60s. dis.; Sheepbridge, 10; Steel Company of Scotland, 1 1/2 to 1 3/4; Steel Company of Canada, 3 to 5; Scottish Australian, 37s. 6d. to 42s. 6d.; Sandwell Park, 20 1/2; South Wales, 10 1/2; Thorp's Gawber, 50s. to 60s.; ditto (pref.), 10 to 10 1/2; Tredegar, B. 21; Ulverston, 9 dis.; West Cumberland, 90s. dis.; Whitehaven Iron, 10s. to 30s.

In shares of foreign copper and lead concerns Rio Tinto (5 p. cent.) have advanced 3 1/2 p. per share. Rio Tinto shares, 15s.; ditto, 7 p. cent., 2s. 6d.; and Yorke Peninsula, pref., 1s. 3d., while Cape and Tharsis (7 1/2 p. cent.) have each declined 10s. per share. Tharsis, 5s.; Panulicillo, 2s. 6d.; Canadian, 1s. 6d.; and Yorke Peninsula, 1s. 3d. Tharsis shares have been steady all the week, from 30 1/2 to 30 3/4. Copiapo are at 12 dis. New Quebrada, 63s. 9d.; Pontigaud, 20; Rio Tinto, 5 p. cent., 91; Yorke Peninsula, pref., 20s. to 21s.

In shares of home mines there is less business doing, but the advance in prices is well maintained. Tin shares have in some cases been reduced, owing to the fall in the tin standards, but cheap shares should now be picked up. North Buxley looks a good speculation, with a rich lode of tin going down in the bottom of the deepest level. In lead shares, East Chiverton are also worth holding on prospects of a discovery in the 90. Among copper shares, East Crebors continue to be well spoken of. Wheel Crebors is reported to be in a splendid position, and the 130 east is now worth 100l. per ton, which is a very important fact for East Crebors. Glasgow Caradons lower, at 25s. 6d. to 27s. 6d.; the next sale of copper ore by this company will take place on Dec. 18, and will be 160 tons, or the same as last month, while the sales in the month of December for some years past have ranged from 200 to 260 tons per month. Carn Breas are at 55. Clementina, 22s. 6d.; Devon Great Consols, 5 1/2; Dolcoath, 54; East Caradon, 60s.; East Van, 45s.; East Lovell, 50s.; East Graven Moor, 9 1/4; Glenroy, 14s. to 16s.; Grosvenor, 10s.; Great Laxey, 18 1/2; Herodfoot, 62s. 6d.; Hingston Down, 11s. 3d.; Killfret, 10s. to 12s. 6d.; Ladywell, 10s. to 12s. 6d.; Leadhills, 90s. to 92s. 6d.; Pant-y-gwry, 46s. 3d.; Penhalls, 35s.; Pen-y-ghedd, 20s. to 25s.; Rhy's Copper, 17s. 6d. to 20s.; Roman Gravel, 12 1/2; South Wales, 10 1/2; South Darren, 67s. 6d.; South Condurvor, 13; South Crebors, 25s. to 30s.; Tankerville, 6 1/2; Tincoft, 16; Tamar, 30s.; Van, 23 1/2; West Assheton, 65; West Chiverton, 65s.; West Pateley Bridge, 45s.; West Pateley, 20s.; Wheel Basset, 60s.; Wheel Agar, 63 1/4; Wheel Comford, 40s. to 50s.; Wheel Killy (St. Agnes), 60s.; Wheel Peavor, 20.

In shares of gold and silver mines, no alteration of importance. Richmond are 2s. 6d. lower; these shares opened 9 1/2 to 10 1/2, but declined at 9 1/2 to 9 3/4; this week's run is 350,000. The total gold returns of Pestarene United for November have been 555 ozs., from 788 tons treated. Port Phillip shares are firmer at 8s. to 10s., as a dividend of at least 1s. per share is expected on them since the New Year. Australasian Mines are at 5s.; Colorado United, 33s. 9d.; Don Pedro, 14s. 6d.; Exchequer, 6s.; Eberhardt, 61s. 3d.; Flagstaff, 27s. 6d.; Frontino, 55s.; I.L.L., 4s. 9d.; Javali, 8s. to 9s.; Pestarene United, 7s. 6d.; ditto (preference), 15s. to 20s.; Ruby, 5; Rio Grande Du Sul, 5; Sierra Buttes, 36s.; South Aurora, 10s. to 15s.

In shares of oil companies, business is quiet. Uphall are 2s. 6d. per share higher, but both classes of Oakbank shares are 6d. lower. Young's Paraffin very firm at 1 1/4 and 1 1/2.

In shares of miscellaneous companies, no particular change to notice. The annual report of Earle's Shipbuilding and Engineering Company has been issued, recommending a dividend at 2 1/2 p. cent., carrying forward 2591l.

The meeting of the Linmer Asphalt Company is to be on Dec. 16, and the working account shows a profit of 1537l., but no dividend is declared. Liverpool Rubber shares are at 4 1/2; Milner's Safe, 8 1/2; Neufchatel Asphalt, 5s. to 7s. 6d.; Palmer's Shipbuilding (B) 8 dis.; Val de Travers Asphalt, 70s. In shares of wagon companies prices are—Birmingham, 15 1/2; Bristol and South Wales, 6 1/2; Gloucester, 9 1/2; Metropolitan, 60s. prem.; Midland, 12 1/2; Railway Carriage, 5 1/4; Starbuck, 11 1/2; Pant-y-gwry, 46s. 3d.; Penhalls, 35s.; Pen-y-ghedd, 20s. to 25s.; Rhy's Copper, 17s. 6d. to 20s.; Roman Gravel, 12 1/2; South Wales, 10 1/2; South Darren, 67s. 6d.; South Condurvor, 13; South Crebors, 25s. to 30s.; Tankerville, 6 1/2; Tincoft, 16; Tamar, 30s.; Van, 23 1/2; West Assheton, 65; West Chiverton, 65s.; West Pateley Bridge, 45s.; West Pateley, 20s.; Wheel Basset, 60s.; Wheel Agar, 63 1/4; Wheel Comford, 40s. to 50s.; Wheel Killy (St. Agnes), 60s.; Wheel Peavor, 20.

RAVENSLIFF MINING COMPANY (Limited).—The annual meeting of this company is to be held on Dec. 16. The report states that the company has a copper property in South Australia and a gold property in New Zealand. Owing to the low price of copper, no mining has been carried on in connection with the copper property, though if the present improvement in that market continues they will direct attention to it. The operations on the other property have been conducted in a careful and economical manner, and they have laid open about 4000 tons of quartz, in most of which gold is freely seen, in readiness to be stowed out and removed to the stamping batteries. It appears the enterprise is well thought of in New Zealand, as 742 shares have been allotted to 27 parties resident in the immediate neighbourhood of the mine.

EMMA SILVER MINING COMPANY (Limited).—The meeting of this company is to be held on Dec. 17. The report shows the directors are in a position to pay off the preference debentures, and will shortly be able also to meet a portion of the original debentures, but in view of the present state of the American litigation they do not think it advisable to distribute any of these funds. The litigation in the English Courts may now be considered as ended, and in every case the directors have succeeded in establishing their claims.

THE STEEL COMPANY OF SCOTLAND (Limited).—This company has purchased at a comparatively moderate price the extensive malleable ironworks and rolling-mills known as the Blochairn Ironworks, situate about two miles east of Glasgow. The works were fitted up several years ago with machinery of the most approved kind for making plate and angle iron, but trade got so bad that they had to stop. It is said the new proprietors will have a portion, if not all, the works converted into a steel foundry. Although the Steel Company is already one of the largest concerns of the kind, they are at present literally inundated with orders of the greatest importance, so that it has become necessary to double their productive capacity, when their works will be one of the first establishments of the kind in the world.

MINERAL POINT TUNNEL COMPANY.—The success anticipated for this enterprise, it will be observed by the remarks in last week's Journal, does not depend upon cutting two or three veins, as there are 15 or 20 veins which in all probability will prove as rich, if not richer, than the J. B. Norris, Mamie Pratt, or Milwaukee lodes,

although they do not show as rich and as wide on the surface. Besides these surface shown veins they have already struck a blind lode, that is to say one which does not show on the surface at all, and have put extra men on to work out that vein as well as the others already cut in the tunnel. The J. B. Norris vein, which was struck a few weeks ago, is very rich and satisfactory. In less than 15 months it is predicted those who buy the stock at the present low price, under par, will find it one of the best dividend-paying investments they have.

Dividends.		Rate per cent.		Description of shares.		Last price.	
Share.	up.	Previous.	Last.	COAL, IRON, STEEL.			
£ 10 .. 8 ..	4 ..	£ 5 ..	£ 5 ..	Arnstons Coal (Limited)		8 1/2	
10 .. 10 ..	4 ..	nil ..	nil ..	Benhar Coal (Limited)		46s.	
100 .. 60 ..	25s. 1/2 ..	nil ..	nil ..	Bolckow, Vaughan, and Co. (Lim.)	A.	75 1/2	
10 .. 10 ..	10 ..	10 ..	10 ..	Cairnbarrow Gas Coal (Limited)		8	
10 .. 10 ..	4s. 1/2 ..	April, 1876 ..	April, 1876 ..	Chillington Iron (Limited)		85s. 8d.	
10 .. 10 ..	4s. 1/2 ..	April, 1876 ..	April, 1876 ..	Clyde Coal (Limited)		75s.	
23 .. 20 ..	10s. 1/2 ..	Dec., 1874 ..	Dec., 1874 ..	Ebbw Vale Steel, Iron, and Coal (Lim.) ..		8 1/2	
10 .. 8 ..	nil ..	nil ..	nil ..	Fife Coal (Limited)		90s.	
10 .. 10 ..	nil ..	nil ..	nil ..	Glas. Port Washington Iron & Coal (L.) B.		80s.	
10 .. 10 ..	nil ..	nil ..	nil ..	Ditto, A		75s.	
10 .. 10 ..	nil ..	nil ..	nil ..	Lochore and Capeland (Limited)		20s.	
10 .. 10 ..	nil ..	nil ..	nil ..	Marbella Iron Ore (Limited)		40s.	
10 .. 10 ..	nil ..	nil ..	nil ..	Monkland Iron and Coal (Limited)		45s.	
10 .. 10 ..	nil ..	nil ..	nil ..	Ditto, Guaranteed Preference		25 1/2 .. 6d.	
100 .. 100 ..	nil ..	nil ..	nil ..	Nant-y-Glo & Blaenau Ironworks pref. (L.)		21	
6 .. 6 ..	nil ..	nil ..	nil ..	Omnia & Cleland Iron & Coal (L. & Red.)		22s.	
1 .. 1 ..	15 ..	15 ..	15 ..	Scottish Australian Mining (Lim.)		42s. 6d.	
1 .. 10s. ..	15 ..	15 ..	15 ..	Ditto, New		20s.	
Stock, 100 ..	nil ..	nil ..	nil ..	Shotts Iron		70	
10 .. 8 ..	nil ..	nil ..	6 ..	Steel Company of Scotland (Lim.)		12	

Rate per cent.		Description of shares.		Last price.	
Share.	up.	Previous.	Last.	COPPER, TIN, SULPHUR.	
4 .. 4 ..	— ..	— ..	— ..	Canadian Copper and Sulphur (Lim.) ..	16s. 6d.
10 .. 7 ..	72s. 6d. ..	60s. 1/2 ..	60s. 1/2 ..	Cape Copper (Limited)	24
1 .. 1 ..	2 1/2 ..	nil ..	nil ..	Glasgow Canadian Copper Mining (Lim.)	27s.
1 .. 15s. ..	2 1/2 ..	nil ..	nil ..	Ditto, New	20s.
10 .. 9 1/2 ..	nil ..	nil ..	nil ..	Huntington Copper and Sulphur (Lim.) ..	43s.
4 .. 4 ..	nil ..	nil ..	nil ..	Panulicillo Copper (Limited)	8 1/2
10 .. 10 ..	nil ..	nil ..	nil ..	Rio Tinto (Limited)	97s. 6d.
100 .. 100 ..	7 ..	7 ..	7 ..	Ditto, 7 p. cent. Mortgage Bonds ..	19 1/2
20 .. 20 ..	5 ..	5 ..	5 ..	Do., 5 p. cent. Mor. Deb. (Sp. Con. Bds.)	86
10 .. 10 ..	17 1/2 ..	16 1/2 ..	16 1/2 ..	Tharsis Copper and Sulphur (Limited) ..	30 1/2
10 .. 7 ..	17 1/2 ..	16 1/2 ..	16 1/2 ..	Ditto, New	20 1/2
1 .. 1 ..	— ..	— ..	— ..	Yorke Peninsula Mining (Limited)	5s.
1 .. 1 ..	— ..	— ..	— ..	Ditto, 15 p. cent. Guaranteed Pref.	20s.

Rate per cent.		Description of shares.		Last price.	
Share.	up.	Previous.	Last.	GOLD, SILVER.	
1 .. 1 ..	— ..	— ..	— ..	Australasian Mines Investment (Lim.) ..	5s.
5 .. 5 ..	7s. 6d. ..	7s. 6d. ..	7s. 6d. ..	Richmond Mining (Limited)	9 1/2
Rate per cent.		Description of shares.		Last price.	
Share.	up.	Previous.	Last.	OIL.	
10 .. 8 1/2 ..	— ..	— ..	9 ..	Broxburn Oil (Limited)	17 1/2
10 .. 7 ..	5 ..	5 ..	5 ..	Dalmatny Oil (Limited)	8 1/2
1 .. 1 ..	15 ..	20 ..	20 ..	Oakbank Oil (Limited)	40
1 .. 5s. ..	15 ..	20 ..	20 ..	Ditto	9s. 6d.
10 .. 10 ..	2 ..	4 ..	4 ..	Uphall Mineral Oil (Limited) A	7 1/2
10 .. 10 ..	— ..	— ..	— ..	Ditto, B Deferred	10
10 .. 8 1/2 ..	17 1/2 ..	12 1/2 ..	12 1/2 ..	Young's Paraffin Light & Mineral Oil (L.)	1 1/2

NOTE.—The above lists of mines and auxiliary associations are as far as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them, and such information as can be ascertained from time to time to be inserted in these lists, they will be good enough to communicate the name of the company, with any other particulars as far as possible.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, Dec. 11.

PROVINCIAL STOCK AND SHARE MARKETS.

MANCHESTER STOCK EXCHANGE.—Messrs. JOSEPH R. and W. P. BAINES, sharebrokers, Queen's Chambers, Market-street (Dec. 11), write:—The tone of the share market for the past week has been very steady, the recent general advance having with few exceptions been fully maintained all round, and where changes of importance have been marked the movement has been still upward, though this has not been quite so rapid as was the case a few weeks ago. The opinion seems to be pretty generally held that the recent rapid advance in prices—an advance which it was only reasonable to expect to some extent—over the prospects of improvement in trade appeared at all tangible, and the suddenness of which is accounted for by the almost panic prices to which shares generally had receded—has brought the values of most shares fully up to a mark which it is likely the results of the immediate future will warrant, and, though a fair demand still continues, the "rush" of buying seems to have in a great degree subsided, leaving a more steady enquiry for investment.

BANKS.—The local banking concerns have been dealt in to an average extent at prices fully up to best quotations lately marked. Quotations remain generally without material alteration.

INSURANCE SHARES have not received much attention lately, arising probably from the fact that during the depression, except in individual cases, and for special reasons this class of security has not suffered to such an extent as other classes, and in the excitement caused by the rally in other directions investments in insurance shares have been somewhat neglected. What transactions have taken place during the week, however, have been at full rates.

GAS AND WATER SUPPLIES AND CORPORATION STOCK.—This class of investment continues to command full prices, though now that investment in industrial securities promises to be more active the demand is hardly so decided as it has been for some time past. Whilst other investments were heavy, and hardly negotiable, this class offered a safe and easily realisable security, which was rather extensively sought after.

COAL, IRON, AND STEEL COMPANIES AND MINING.—Until very recently the chief advance had been in these class of investment, and, though a strong tone is still noticeable, prices having risen so rapidly has led to a few realisations, and a consequent falling off from the extreme buoyancy of the market. Bolckow have been dealt in pretty freely during the week at steadily advancing quotations. In Tredegar Iron and Ulverston Mining the late quotations are the best. Ebbw Vale, in which a large business has been done lately in this market, stand at about quotations ruling a week ago, though they have fluctuated fractionally during the week. A. Knowles and Sons Colliery shares have had a sharp rise during this week, and the market is still "buyers" at full quotations. West Cumberland Iron and Steel were quoted 1/2 higher to-day. Great Laxey Lead Mines shares keep steady at recently marked quotations. John Brown and Co. have receded during the week, being now quoted 14 to 13 1/2 dis. Cammell and Ashbury Railway Carriage and Iron have been untouched, the quotation remaining as they were a week ago. An odd lot of Nant-y-Glo and Blaenau Preferred has changed hands at 24, the price now being about 1 lower than last week.

COTTON SPINNING AND MANUFACTURING.—This class of security has had a large amount of attention lately, and prices have within the past few weeks risen rapidly, in many cases, in comparison with the amount of the shares, far in excess of advances marked in any other classes. During the past week, however, the demand at the higher rates has slightly eased, the high prices having induced some holders to realise, but a healthy demand for investments still remains, especially in low-priced shares which have any intrinsic value at all.

MISCELLANEOUS SHARES of all classes have more or less participated in the general advance lately made, and though in individual cases a decline or two is noticeable, it is from reasons peculiar to the concern, and as a rule the tone in this class is hopeful.

IN RAILWAYS a general decline is marked during the past week owing to the withdrawal of gold from the Bank of England, and the consequent expectation of dearer money, coupled with the traffic returns, which, with the exception of London, which report an increase of 13,890, have been disappointing. The inability of Scotch lines to come to terms for a working agreement has caused a serious adverse movement in those concerns chiefly interested.

NEWCASTLE-ON-TYNE STOCK EXCHANGE.—Messrs. SPENCE and IRWIN, stockbrokers (Dec. 11), write:—Our market has been more animated than last week, owing to a better demand for iron shares, and for some of our mines. The strongest advance is in Conselt iron shares, which are now 50 p.

West Cumberland are being very strongly bought up, and in consequence the price is improving; 4½ ex. div. now bid. Crook Burn Mine are freely offered at par; ¼ dis. is bid.—Dubby Syke Mine: 17s. 6d. paid shares have been done this week at 6s. each, and are still offered at that figure, and 20s. paid at 6s. each.—Green North Mine: No business doing in these shares at present, as buyers and sellers hold out firm for their prices—4½ to 4¾.—Hexham and Edmondbyres Mine: Old and new shares are offered at par; there are no definite buyers at present, but we have no doubt business could be effected at a small discount.—Teesdale Mine: The strong buying from Durham has cleared the market at present; 6s. 6d. is largely bid for ordinary shares, and 7s. for preference, without finding sellers.

CORNISH MINE SHARE MARKET.—Mr. JOHN CARTER, Camborne (Dec. 11), writes:—A fair number of transactions have been booked during the week, and only slight fluctuations have taken place in prices of shares, to-day's quotations being below the highest reached, and slightly under those of last week. The Tin Standards were reduced 2s. per cwt. on the 6th inst. Subjoined are the closing quotations this afternoon:—Blue Hills, ¼ to 1; Botallack, 80 to 90; Carn Brea, 54 to 55; Cook's Kitchen, 3½ to 3¾; Dolcoath, 51½ to 52½; East Pool, 21 to 21½; East Caradon, 2½ to 3¾; East Lovell, 2½ to 2¾; Killfret, ¾ to 1; Mellanear, 4½ to 4¾; New Cook's Kitchen, 5½ to 6½; Penhall, 1½ to 1¾; South Caradon, 75 to 80; South Crofty, 4½ to 4¾; South Condurrow, 12½ to 13½; South Frances, 10 to 10½; Tincroft, 15½ to 16½; West Basset, 11½ to 11¾; West Chiverton, 2½ to 3½; West Frances, 11½ to 12½; West Peavor, 5½ to 6½; West Seton, 44 to 46; West Tolgus, 24 to 26; Wheal Agar, 6½ to 6¾; Wheal Basset, 2½ to 3; Wheal Grenville, 4½ to 5; Wheal Jane, 4½ to 4¾; Wheal Kitty, 2½ to 2¾; Wheal Peavor, 19½ to 20½; Wheal Uny, 1½ to 1¾.

—Mr. J. H. REYNOLDS, Redruth (Dec. 11), writes:—The market has been decidedly less active during the week, and the closing quotations this afternoon were:—Carn Brea, 53 to 55; Cook's Kitchen, 3½ to 3¾; Dolcoath, 51½ to 52½; East Caradon, 3 to 3½; East Lovell, 2 to 2½; East Pool, 21 to 21½; Herodsfoot, 3½ to 3¾; Killfret, ¾ to 1; Marke Valley, 1½ to 1¾; Mellanear, 4½ to 4¾; New Cook's Kitchen, 5½ to 6; North Busy, 3 to 4; North Levant, 4½ to 4¾; North Penstruthal, ¾ to 1; Phoenix, 4½ to 5½; South Caradon, 75 to 80; South Condurrow, 12 to 13; South Crofty, 4 to 5; South Frances, 10 to 10½; Tincroft, 15½ to 16; West Basset, 11 to 11½; West Chiverton, 3 to 3½; West Frances, 11½ to 12½; West Peavor, 6 to 6½; West Tolgus, 25 to 26; West Seton, 45 to 47½; Wheal Agar, 6 to 7; Wheal Basset, 2½ to 3; Wheal Grenville, 5 to 5½; Wheal Jane, 4½ to 4¾; Wheal Peavor, 19½ to 20½; Wheal Kitty (St. Agnes), 2½ to 3; Wheal Uny, 1½ to 1¾; Wheal Comfort, 2½ to 3.

—Mr. M. W. BAXTER, Liskeard (Dec. 11), writes:—The market has been dull and inactive for most of the week, with a prevalence of sellers at lower prices, whilst copper and lead mines remain firm. Subjoined are this afternoon's quotations for the shares principally dealt in:—Bedford United, 5½ to ¾; Carn Brea, 53 to 54; Clitters, 1½ to 2; Cook's Kitchen, 3½ to 3¾; Dolcoath, 51 to 52; Devon Consols, 6½ to 6¾; East Caradon, 2½ to 3; East Pool, 20 to 21; Gawton, ¾ to ¾; Glasgow Caradon, 1½ to 1¾; Herodsfoot, 3 to 3½; Hingston Down, ¾ to ¾; Marke Valley, 1½ to 1¾; Phoenix, 5 to 5½; South Caradon, 70 to 75; South Condurrow, 11½ to 12; South Crofty, 6½ to 7; South Frances, 9½ to 10½; Tincroft, 15½ to 16; West Chiverton, 2½ to 3; West Frances, 11 to 11½; West Seton, 44 to 45; Wheal Agar, 6 to 7; Wheal Basset, 2½ to 3; Wheal Grenville, 4½ to 5; Wheal Peavor, 18 to 18½; Wheal Uny, 1½ to 1¾.

MARKET ECHOES, AND MINING MATTERS.

The dull season of the year has not had its usual effect upon the Mining Market, thanks to the fact that the said market, having only lately awakened from a dull season of many months duration, has set at naught established rules, and has put on a buoyant appearance which bids fair to be a lasting one. The gathering strength of the quotations for lead has been one of the chief factors in this upward movement, for mining investors have always been very partial to lead mines, and now that the metal is almost daily getting dearer in price large orders are constantly received on 'Change for shares, with the natural result of higher prices. During the last fourteen days an extensive and bona fide business has been transacted in the leading lead mines, and we would specially note the transactions in Van, Roman Gravel, South Darren, Herodsfoot, West Assheton, and some others, as demonstrating the renewed interest taken by investors in our home lead mines. For examples in other mines we need only point (amongst several) to the speedy—we may say immediate—absorption of the new Prince of Wales shares, the demand for Panullicillo and Rio Tinto, and the remarkable buoyancy of the shares of our old friend Devon Consols. Let this last-named be cited as one of the many examples of the vitality of mining—a mine which yielded enormous riches to a former generation, which now shows a new vigour, and which bids fair to renew some of the riches of its former days. As further examples, have we not for the honour of England our Dolcoaths, Carn Brea, Botallacks, and others of a similar calibre; and had we not until lately the famous Ding Dong, which had been at work for centuries? And for the honour of Scotland we can point to the Leadhills, the records of whose 'mines and lead pits' go back almost to the days of our own Norman Conquest, and which now in the closing days of 1879 can show to the world a mine worth on a minimum calculation £400,000 to the shareholders. And for Wales, have we not a Minera and a Talargoch, and of late years a Van? Given promising bala, a liberal capital, honestly devoted to the mines, and judiciously expended, intelligent and vigorous management, directed by scientific knowledge and practical experience, and what industry can point to such brilliant records of success as mining?

To descend to the more prosaic subject of the present conditions of the Mining Market we may state, aene the public attention now so strongly directed to lead shares, that we are almost daily asked, and doubtless, many other members of the Mining Market, have to answer the same question:—“What are the cheapest lead shares now offering?” It is not a very easy matter to give a convincing answer from one point of the ordinary investor's view, for now that shares have risen so much—in several cases to the extent of 300 and 400 percent.—it does not seem to be understood that many of such shares are still “cheap.” The measure of cheapness is not to be gauged by the present price as compared with that ruling some two or three months since, but with the present price as compared with the prospects of the mine and the tendency of the lead market. Now, granted a good mine, the prospects of lead are so abundantly favourable at this present moment that it may reasonably be expected that a much higher price will be obtained next spring for lead ores. Higher prices mean increased dividends for mines now paying profits, and a commencement of dividends for those now paying their way. These results will infallibly bring about increased values, for it is a fact that, taking lead shares all round, the established rise has only been commensurate with the actually increased value of lead; therefore, it is a legitimate conclusion to arrive at that all sound lead shares are still “cheap,” and we say to those who ask for cheap shares, as we did some months back before the late advance occurred, “buy into the leading mines and such ‘progressive’ ones as possess undoubted chances of success, and as far as mining matters can be certain, there are good profits to be made within the next few months.”

The mines of the Llanrwst district bid fair to give a good account of themselves in 1880. The district literally teems with mineral wealth, and now that it is likely at two or three different points to receive a vigorous development in depth we believe, from our own knowledge of the district, that some very rich discoveries are in store for the New Year. At the Hafna Mines of the Mineral Corporation there are points now worth 1½ to 3 tons, 1½ to 1 ton of lead per fathom, all at a shallow depth, whilst the blende, which is found extensively, is of splendid quality. The neighbouring D'Eresby Mountain Mine is said to be giving undoubted signs of becoming a fine property in a few months, and the Pandora Mine continues to yield well, although its present output would be much increased by the shaft being sunk another 10 fms. At Great D'Eresby (worked by the Mineral Corporation) it is hoped that the machine drills will enable the fine Fuchaslas lead shortly to be cut. On either side of the boundary north and south this lead has yielded large quantities of lead. At North D'Eresby Mountain, which has been the district on the north, the indications are such as to lead to the belief of a very profitable mine as the ground is opened up. There are other mines in the district which will probably give a good account of themselves in the New Year if they are energetically worked. JAMES H. CROFTS.

INVESTMENT NOTES.

The commencement of the fortnightly settlement at the end of the week has made the market more busy, but business has been somewhat quiet during the past few days. A most satisfactory report has just come to hand from the manager of North D'Eresby Mountain Mine. The lode is now worth 25 cwt. of lead per fathom. It must be remembered that the adit level is only driven about 8 or 10 fathoms, and is near the base of the mountain, so that its importance is immense. It is certain that the D'Eresby Mountain district will almost startle the public next year, and this—North D'Eresby Mountain—mine, the cheapest to be found, should at once receive the attention of bona fide investors while shares are at par. The selection made in last week's Notes will guide intending investors, and as there is no additional feature except the improvement above noticed further comment is unnecessary.—Old Broad-street, Dec. 12. ALFRED E. COOKE.

GAS LOCOMOTIVES.—Some improvements in gas engines to adapt them for locomotive purposes have been invented by Mr. J. R. PURSELL, of Blackfriars-road; they consist in dispensing with the trunk sliding block of what is known as the “silent engine,” and in fitting to the main driving shaft on which the fly-wheel is carried a tooth edged or tooth faced wheel to gear into a wheel upon an end on shaft, this carrying a bevel wheel on its end to engage into either of two bevelled pinions on the axle of one of the pair of driving wheels which bear upon the rails. The bevelled pinions are of the friction kind, and are so keyed upon the axle that they may run loose or tight as desired under the control of a clutch whose lever is within reach of the attendant, who regulates by the clutch mechanism the direction in which the machine shall travel. Other forms of gas engines may be adapted for this purpose if desired.

The Master of the Rolls has appointed Mr. Robert A. McLean to be the liquidator of the Westminster Association (Limited).

West Polgooth Tin Mining Company

STICKER, NEAR ST. AUSTELL, CORNWALL.

On land belonging to C. H. T. HAWKEN, Esq., Trewithan, Cornwall.

To be divided into 6000 Parts or Shares of £1 each.

5s. on application, 5s. on allotment, subsequent calls as may be required at intervals of three months.

Cost Book System, with monthly audit by a Public Accountant.

PURSER—Mr. F. E. YOUNG, 13, Queen-street, Exeter.

MANAGER—Capt. THOMAS WASLEY, late Manager of West Polgooth and other Mines.

AUDITOR—Mr. R. SOUTHCOTT, Post Office-street, Exeter, Public Accountant.

BANKERS—To be appointed.

PROSPECTUS.

This company is formed to work a piece of almost virgin ground (lying exactly to the south of and adjoining the Old Polgooth Mines), through the entire length of which run the main trunk lodes of the district known as the Great Polgooth and Hewas.

It is intended to erect a small rotary engine and other suitable machinery for pumping, stamping, &c. It is intended, however, in the first instance, to confine attention to those lodes which have paid such enormous profits, both shallow and in depth, in Hewas and Old Polgooth.

It is believed there is no such piece of comparatively unwrought ground to be had in Cornwall.

The Old Polgooth raised over £3,000,000 worth of tin, and paid £1,000,000 in dividends, while Wheal Hewas raised an enormous quantity of tin and nickel, and paid some hundreds of thousands of pounds profit to the adventurers.

The geological conditions are all that could possibly be desired. The kills through which the lodes pass is of the same congenial character that proved so productive in the parallel lodes adjoining. A large elvan course passes to the south, through the whole length of the sett, and intersected by three counter lodes of great promise.

All the machinery required is a small engine for pumping, stamping, and dressing appliances, when good returns of tin ores can be sent to the market in about three months after the commencement of the works, and from the present low price of machinery and materials, this is an exceptionally favourable time for starting such an undertaking. There is a certain prospect of a good rise in value of tin.

The proceeds of the first call will erect all the necessary machinery, and carry on the mine for 12 months, after which it is confidently believed the amount, to

be raised by calls not exceeding 2s. 6d. per share, at intervals of not less than three months, will open a lasting and profitable mine.

There will be no other call than the first required until the machinery is erected. There is very little doubt that before this time the mine will pay cost, and the shares will command a very substantial premium.

This company is started for the purpose of legitimate mining. A stipulated sum is to be paid to the vendors for the grants and previous disbursements. The vendors of the property having agreed to take in payment the sum of 1000l. in cash, payable in two equal instalments, and 1500 fully paid shares.

Special attention is called to the feature in the financial management which provides for a monthly audit by a public accountant, to whom the books of the mine will be at all times open.

This extensive sett is held under lease from C. H. T. Hawken, Esq., for a term of 21 years at a rent of £20 per annum, merging into dues of 1-15th.

A considerable number of shares have been allotted privately. Early application is requested, which should be addressed to:—

The Purser—Mr. F. E. YOUNG, 13, Queen Street, Exeter.

Capt. THOMAS WASLEY, Chacewater, Cornwall.

Mr. WILLIAM BRAY, Chacewater, Cornwall.

Mr. HURFORD, Taff Vale Railway, Cowbridge, South Wales.

All cheques should be made payable to “The Purser of Polgooth Mine,” and crossed “National Provincial Bank of England,” Exeter.

Copies of reports from THOMAS J. BEWICK, Esq., M.E., 4, Broad Sanctuary, London, S.W.; Capt. FRANCIS THOMAS, Par, Cornwall; Capt. JAMES TREDINNICK, St. Agnes, Cornwall; Capt. JOHN EDWARDS, late Manager of “The St. Stephens” Tin Mines, St. Stephens, Cornwall; Capt. M. WASLEY, St. Agnes, Cornwall, can be had on application.

It is proposed to CLOSE THE LIST ON DECEMBER 31st, immediately after which date the First General Meeting of Shareholders will be held, and a committee of management appointed, of which due notice will be given.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE ISLE OF WIGHT CHEMICAL MANURE AND AGRICULTURAL SUPPLY ASSOCIATION (Limited).—Capital 10,000l., in shares of 5l. To carry on the business, and deal in all kinds of manure. The subscribers are—F. H. Atherley, Shanklin, 20; J. Jolliffe, Bournemouth, 20; S. E. Brook, Ryde, 20; J. H. Fardell, Ryde, 19; J. Harvey, Brading, 10; M. Cooper, Yarmbridge, 10; F. C. Fardell, Ryde, 1.

THE ASSAM RAILWAYS COMPANY (Limited).—Capital 250,000l., in shares of 10l. To construct, acquire, and work railways in Assam, East Indies. The subscribers (who take one share each) are—Gen. Boileau, 31, Ladbroke-square; Gen. Graham, 10, Harley Gardens; J. B. White, 2, Pall Mall-place; E. A. Jack, 7, Haroldstone-road; J. H. Hutchinson, 15, Angel-court; F. Finlayson, South Kensington; C. Greenway, Clapton.

THE PLATE LAND COMPANY (Limited).—Capital 100,000l., in shares of 10l. To buy, farm, improve, sell, or otherwise dispose of lands situate in the United States of America. The subscribers are—J. H. Barclay, Reform Club, 1; J. T. Courtney, Temple, 1; J. H. Parks, 77, Belsize Park, 1; W. A. Hunter, 6, Pump-court, 1; J. W. Meston, 75, Union-street, 10; W. Alexander, Aberdeen, 10; A. Barclay, Aberdeen, 10.

THE COLORADO RANCH COMPANY (Limited).—Capital 25,000l., in shares of 100l. To acquire, improve, sell, or otherwise dispose of property in the United States. The subscribers who take one share each are—J. H. Barclay, Reform Club; J. T. Courtney, Temple; J. H. Parks, 67, Belsize Park; W. A. Hunter, 6, Pump-court; J. W. Meston, 75, Union-street; W. Alexander, Aberdeen; A. Barclay, Aberdeen.

VAAL RIVER DIAMOND AND LAND OF SOUTH AFRICA COMPANY (Limited).—Capital 100,000l., in shares of 25l. To acquire certain properties situate on the banks of the Vaal, the Nodder, and Vet rivers, in Griqualand West; to work, sell, or otherwise dispose of same. The subscribers (who take one share each) are—H. Hollingsworth, 319, Vauxhall Bridge-road; J. R. Mascall, 81, St. George's-road; J. C. Bromfield, Brighton; C. Elliott, 9, Hart-street; W. J. Siddaman, 2, Poplar Walk-road; A. McKenyon, 21, Featherstone-buildings; W. J. Ripsey, Wimbledon.

THE BLACKPOOL, ST. ANNE'S, AND LYTHAM TRAMWAYS COMPANY (Limited).—Capital 60,000l., in shares of 5l. To construct, maintain, and work tramways and railways in Lancashire. The subscribers are—T. H. Clifton, Lytham, 400; J. Duckworth, Bury, 200; W. J. Point, Manchester, 100; W. H. Knight, Sleaford, 100; G. Boddy, Liverpool, 100; P. Eberle, Liverpool, 100; G. H. Goodison, Liverpool, 50.

THE WESTERN TIN-PLATE WORKS (Limited).—Capital 25,000l., in shares of 100l. To carry on the manufacture of iron, steel, tin, and other articles. The subscribers (who take five shares each) are—J. T. Smith, Barrow-in-Furness; G. B. Morris, Danygraig; W. H. Forester, Swansea; J. Powell, Swansea; R. T. Morris, Danygraig; E. Trubshaw, Barrow-in-Furness; W. Kellett, Wigan.

OUILLWYN AND DULAIS COLLIERIES COMPANY (Limited).—Capital 80,000l., in shares of 5l. To purchase or otherwise acquire lands and properties in South Wales or elsewhere, for the purpose of carrying on general mining operations. To smelt and treat ores, and to sell, let, or otherwise dispose of collieries, mines, &c., in the possession of the company. To mine for coal, ironstone, stone, fire-clay, and other minerals, and to carry on all the business incidental to a colliery company. The subscribers are—H. N. Miers, Ynyspenllwch, J.P., 40; H. Cordery, 143, Haverstock Hill, gentleman, 60; G. R. G. Rowe, Highbury, merchant, 40; T. Montagu, Haverstock Hill, gentleman, 20; P. Dawet, 61, Torrington-square, newspaper proprietor, 40; J. Neil, Brixton, merchant, 300; W. H. Huxley, Brixton, gentleman, 100. The subscribers to the articles shall be the first directors, the qualification being fixed at 20 shares.

THE WILSON ENGINEERING COMPANY (Limited).—Capital 20,000l., in shares of 10l. To manufacture, deal in, and sell cooking ranges, stoves, machinery, implements, &c. The subscribers are—P. Colquhoun, 2, King's Bench-walk, 10; D. Wilson, 2, Percy-square, 5; W. Scollay, Goswell-road, 10; E. Gething, Salisbury-court, 3; H. M. Atkinson, Clapham, 5; A. A. Pike, 97, Cromwell-road, 10; C. Sims, Camberwell, 2.

THE SOUTH INDIAN GOLD MINING COMPANY (Limited).—Capital 100,000l., in shares of 1l. To adopt and carry into effect an agreement made between G. P. Harding, J. Bell, W. Lonsdale, and J. A. Mays as trustees on behalf of the company. To work the gold mining reefs and rights acquired under said agreement, and any other that may hereafter be made. To erect, construct, or acquire by purchase or otherwise all works, buildings, reservoirs, tanks, machinery that may be required by the company, and to carry on the business of a mining company in all its branches. Terms of the agreement are—3000l. in cash and 7000 fully paid shares. The subscribers are—S. L. Howard, Langton, Lieut.-Col., 250; T. G. Gillespie, Weybridge, coffee planter, 250; E. Wray, Shooter's Hill, gentleman, 250; R. McIlraith, 45, Bedford Gardens, merchant, 100; W. Nicol, South Dulwich, merchant, 100; J. C. Fowle, 18, Leadenhall-street, merchant, 50; T. Wilson, 3, Fenchurch-avenue, merchant, 50. The first

directors are Messrs. Howard, Gillespie, E. Wray, and the Hon. G. C. Talbot, and the qualification is 250 shares.

THE PARISIAN MILLINERY DRESS AND COURT COSTUME ASSOCIATION (Limited).—Capital 20,000l., in shares of 1l. To acquire premises for the purpose of carrying on the business of millinery, dress-making, &c. The subscribers (who take five shares each) are—F. F. Leager, Belvedere; F. S. Etty, 29, North Audley-street; B. E. Godfrey, 171, New Bond-street; W. T. Jennings, Wandsworth; J. S. Pickford, 172, New Bond-street; F. Davis, 55, New Bond-street; A. Pearce, 27, Chancery-lane.

THE EPPING FOREST HOTELS COMPANY (Limited).—Capital 22,000l., in shares of 50l. To purchase or otherwise acquire the Forest Hotel and any other hotels, and to carry on the business of hotel keepers in all its branches. The subscribers are—F. Gordon, 24, Bloomsbury-square, 50; T. J. Hamps, 24, Bloomsbury-square, 10; W. Nightingale, 8, Lonsdale-square, 10; J. Pound, 81, Leadenhall-street, 10; H. L. Hammack, 59, Bishopsgate-street, 10; G. W. Haines, 56, Moorgate-street, 10; A. Johnston, 15, Finsbury-place South, 10.

THE BORROWERS' GUARANTEE COMPANY (Limited).—Capital 20,000l., in shares of 50l. To become surety or security for any borrower of money, and to guarantee the repayment of borrowed money; to take moneys on deposit, &c. The subscribers are—F. B. Jennings, 9, Lower Brook-street, 2; J. H. Singleton, Ipswich, 2; H. J. Wright, Ipswich, 1; G. Wright, Ipswich, 1; J. Beart, Ipswich, 2; B. Last, Ipswich, 2; J. Talbot, Ipswich, 1; W. Bennett, Ipswich, 1.

GILWEN IRON AND TIN-PLATE COMPANY (Limited).—Capital 20,000l., in shares of 100l. To manufacture and sell iron, tin, and tin-plates. The subscribers are—E. Thomas, Ystalyfera, 7; D. Evans, Ystalyfera, 5; E. Williams, Cunturch, 2; J. Gravell, Ystalyfera, 7; J. Beynon, Ystalyfera, 7; T. Williams, Ystalyfera, 2; D. Davies, Ystalyfera, 5.

CORNWALL WESLEYAN METHODIST SCHOOL ASSOCIATION (Limited).—Capital 55,000l., in shares of 50l. and 10l. To establish and carry on day and board schools. The subscribers are—W. H. Martin, Truro, 10; E. Banks, Falmouth, 5; H. Trembath, Redruth, 5; G. Bazeley, Penzance, 10; A. Jennings, Truro, 5; E. Kendall, Truro, 5; A. Lanyon, Redruth, 10.

ROBINSON, SMITH, RILEY, AND COMPANY (Limited).—Originally established at Guiseley in 1842; now registered under the Limited Liability Acts.

HOREBOUND BEER BREWERY COMPANY (Limited).—Capital 25,000l., in shares of 5l. To purchase the Horebound Beer Brewery at Haggerstone, and to carry on the business. The subscribers are—R. A. Farlow, Enfield, 50; A. E. Hodder, Tottenham, 10; W. A. Swan, Aldershot, 10; A. Browne, 112, Cheapside, 5; T. Mason, Aldershot, 10; H. Greener, Notting Hill, 5; W. J. Tompsett, White-chapel, 5.

THE FOUR OAKS PARK COMPANY (Limited).—Capital 100,000l., in shares of 20l. The purchase of estates at Sutton Coldfield, also Sutton Park, and to establish and maintain race courses. The subscribers are—Lord B. Paget, Lichfield, 25; T. Bate, King's Heath, 150; F. W. Simkin, Walmley Penns, 50; J. Sheldon, Erdington, 250; F. Grettton, Burton-on-Trent, 250; J. D. M. Chadwick, Sutton Coldfield, 25; R. S. Sadler, Sutton Coldfield, 25.

THE GLOBE ALKALI COMPANY (Limited).—Capital 50,000l., in shares of 10l. The purchasing of the business of Crosfield Brothers and Co., at Windle, and carrying on the business of alkali and chemical manufacturers. The subscribers are—G. L. Wigg, Runcorn, 5; M. Steele, Runcorn, 5; J. H. Dennis, Liverpool, 100; R. Steel, New Brighton, 5; W. Terms, Runcorn, 5; H. F. Cligg, Bootle, 5; E. S. Holland, Liverpool, 10.

ANGLO-FRENCH BREWERY COMPANY (Limited).—Capital 100,000l., in shares of 10l. To carry on in England, France, or elsewhere the business of brewers. The subscribers are—A. Purcell, 35, Welbeck-street, 1; W. F. Rees, Greenwich, 1; J. H. Hanbury, 117, Leadenhall-street, 1; J. Alexander, 103, New Kent-road, 1; H. Burgade, Paris, 1; Viscomte de Chasteigner, Bourg, 10; A. F. de Boisse, Paris, 10.

NATIONAL PROVINCIAL BANK OF ENGLAND.—A dividend at the rate of 8 per cent. per annum and a bonus of 5 per cent. is announced, payable on the 9th proximo. The total distribution is thus 9 per cent. for the six months, this being 1 per cent. below the amount paid for the corresponding period last year.

EMMA SILVER MINING COMPANY.—The directors have issued a detailed statement for the year 1878 of their proceedings against promoters, &c., and state that they are in a position to pay off the preference debentures, but think it not desirable for the present to distribute any of the funds at their disposal.

THE FISCAL MINES OF PRUSSIA.—During the financial year 1878-79 there were in operation the following mines and other connected works belonging to the Prussian Government:—Coal mines, 17; lignite mines, 9; ironstone or iron ore mines, 10; lead, silver, and other metallic mines, 5; salt works, 6; rock salt mines, 3; stone quarries, 9; iron smelting works, 6; lead, silver, and other smelting works, 5.

BREACH OF COLLIERY RULES.—The Barnsley magistrates yesterday sentenced a colliery underviewer, named John Ruebeck, to one month's imprisonment for committing a breach of rules at Barrow

Hematite Colliery, on Oct. 31. Charles Beevors, the certificated manager, was fined 5*l*. and costs for a similar offence. The proceedings were ordered by the Home Secretary, in consequence of an accident that occurred there on the above-mentioned date, when a trammer named Fisher fell through a hole made in the shaft for ventilating purposes, and was killed. There was no fence to prevent anyone from falling through the hole. Notice of appeal was given by Roebuck.

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, Dec. 11: Produce for the month of November, 30,000 oits. = 11,625*l*.; yield, 6*l*. 3 oits. per ton. —Cuba: 200 tons stamped in 15 days; yield, 2*l*. 6 oits. per ton.

DON PEDRO.—Capt. Vivian, Nov. 4: The produce for October amounts to 595 oits. —Mines and Drains: Since direct writing the remainder of the new 2*l*. 4 in. bolts has been put in the 60 ft. wheel, also some more keys around the axle; thus nothing has been done towards getting down to the bottom of the mine, but I hope now we shall not have any further interruption. The wheel is at present doing excellent duty, and forking the water very rapidly. —Bryant's: No change has taken place calling for remark. By the end of this week I expect operations will be extended here sufficiently far eastward to put up another rise from Bryant's level, so as to prove the ground between this point and the new lode.

Capt. Vivian, Nov. 10: Mine Drains: Since my last the water has been forked to the 40, and this has been cleared of debris to the No. 2 incline drawing shaft. We have had one slight burst of water from the No. 8 old stopes, but did not bring with it so much stuff as on previous occasions. This has since been cleared, and everything is in a fair way for getting to the bottom of the mine. Since Saturday, the 8th current, we have been drawing debris from the No. 1 sump shaft and the No. 2 drawing shaft, a large quantity of which has been discharged. The 60-ft. wheel, with all other machinery throughout the establishment, is in good condition and working well. —Bryant's: The level is being extended eastward as fast as possible, from where we hope to communicate a rise with the stopes in the new lode in a short time, and which will enable us to discharge the ore from the said stopes with greater facility. I may mention, however, that no improvement has taken place here calling for remark. —High Viaduct Across Valley: Repairs to this are well advanced, and a very good job is being done. It will be made sufficiently strong enough to resist the most heavy gales we may be visited with. —The 30-ft. Wheel: Progress here has been rather slow for want of force, but will be more rapid when the repairs to the viaduct referred to above are completed.

PITANGUI (Gold).—Mr. W. Hart, the secretary, writes:—I have the satisfaction of informing you that a cable message has been received this day (Dec. 8) from the company's agents in Rio de Janeiro, dated the 6th inst., announcing that the lode had been cut at the Pitangui Mine. As soon as further information is received by mail the shareholders will be immediately advised of the same. The directors trust in the meantime that the lode may prove a valuable one. Some little time may have to be given for explorations before its value can be definitely ascertained, but the mine being in former years one of the most prosperous of its class in Brazil, there is no reason to hope that the lode now reached may fully realize the expectations entertained.

FRONTINO AND BOLIVIA.—Messrs. Restrepo's letter of advice informs the directors that they have dispatched a remittance of gold, valued by them at 432*l*. 10*s*. 6*d*. the produce of the mines for the month of September. The remittance for August was 409*l*. 5*s*. The Silencio Mine has yielded this month 40 lbs. (Spanish) —592 ozs.—of gold, the produce being derived entirely from sinking the shafts and driving the ends. The highest previous monthly return ever given by this mine was 61 lbs. —502 ozs.—in June, 1878, but in that month the principal portion of the ore was obtained from stoping.

ANTIOQUA (Fronzo).—The statement of profit and loss for the month of September shows a loss of 212*l*. 1*s*. 6*d*. In addition to the cost of 308*l*. 1*s*. 6*d*. the sum of 100*l*. 10*s*. 6*d*. was spent on capital account.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, \$30,000, from 520 tons of ore. Refinery, \$30,000. No. 1 furnace out of order; stopped temporarily. No. 2 started instead.

R. Rickard, Nov. 19: During the past week explorations in the mine have been carried on vigorously, and with very good results. The 200 drift has been advanced 7*l*. 10*s*. 6*d*. in very hard rock, and the 100 drift has been advanced 17*l*. 10*s*. 6*d*. in very favourable looking ground. The 400 quartzite drift has been advanced 34*l*. 10*s*. 6*d*.; the quartzite in the present end is very narrow, varying from 2 to 6 inches wide. The 400 north cross-cut (No. 3) has been extended 14*l*. 10*s*. 6*d*.; now in a total distance of 28*l*. 10*s*. 6*d*. In the present end we have encountered some ore, but have not explored it sufficiently to say of what value it is. The 500, west from No. 12 chamber, has been extended 7*l*. 10*s*. 6*d*. in very hard rock. The 500, north from the same chamber, has only been extended 1*l*. 10*s*. 6*d*.; the men having been occupied in making connection for ventilation. A winze has been sunk from No. 12 chamber to a depth of 33*l*. 10*s*. 6*d*.; in very fine gold ore. The 600 west drift has been extended 15*l*. 10*s*. 6*d*.; without any change to mention. The 600, west from north fissure drift, has been drifted 21*l*. 10*s*. 6*d*. in very favourable ground. The 600, north from the same drift, has been advanced 11*l*. 10*s*. 6*d*. in very favourable ground for ore. The drift from No. 2 winze, from north fissure drift, in the 600, has been extended 14*l*. 10*s*. 6*d*. in very favourable looking ground for ore. All the size of the drift is now in ledge matter and low grade ore. The 800 drift has been extended 8*l*. 10*s*. 6*d*. in very hard limestone. The 900 west drift has been extended 19*l*. 10*s*. 6*d*. in the same character of ground (quartzite). The 900 north cross-cut has been drifted 13*l*. 10*s*. 6*d*.; the present end is in quartzite. The 900 winze is down a total depth of 35*l*. 10*s*. 6*d*.; this winze has been suspended for the time being on account of water. We are now making preparations to resume work in the 1000 ft. level. The chambers, on the whole, are looking better than they were last week. The furnaces are in good working order, and smelting average quantities of ore.

EBERHARDT.—Frank Drake, Nevada, Nov. 18:—Progress report for week ending Nov. 15:—Eberhardt and Aurora Tunnel: Distance run to November 8, 458 fms.; Run for week ending Nov. 15, 33 fms.; Run for month of November, 82 fms.; total distance driven to Nov. 15, 1879, 460 fms. —Remarks: The work for the past week has been exceedingly hard, dull, and broke badly. After our last blast, on Saturday, it showed a change for the better, breaking ground. Capt. Drake further reports that he expects to reach the line of the South Aurora ground by Jan. 1, 1880.

ISABELLE (Gold and Silver).—Foreman's report for the week ending Nov. 15: Total distance from monument to face of tunnel 1344 ft. Advance for the week 56 ft. Rock medium, good blasting, good drilling. Everything about the work running smooth.

RUBY AND DUNDEBERG CONSOLIDATED.—Eureka, Nov. 15: Contracts have been let for running drifts 100 ft. each on the 400 ft. and 500 ft. levels—these expected to be completed in three weeks. During the week we have commenced a new drift from the winze about 40 ft. below the 400 ft. level for the purpose of getting into the old ore chamber, and it has been advanced 10 ft. The 500 ft. south drift has been advanced 46 ft.; total distance from turn-table, 110 ft. The intermediate drift has been advanced 15 ft.; now in 46 ft., without any change since last report. The west cross-cut has been advanced 7*l*. 10*s*. 6*d*.; total, 13*l*. 10*s*. 6*d*. The 400 ft. south drift (contract) has been advanced 16 ft. in two days. The new drift started from the station is in very good looking ground; some small seams of ore have been encountered, but nothing of value. The intermediate drift between the 400 ft. and 500 ft. levels is in a change of ground, which is looking favourable for ore; some stones of very good ore have been found.

Eureka, Nov. 22: The 500 ft. south drift from east cross-cut has advanced 35 ft., now 145 ft. from turntable. Progress has been slower this week than last, owing to the ground being much harder. The west cross-cut from the station has advanced 14*l*. 10*s*. 6*d*.; now 27*l*. 10*s*. 6*d*. The intermediate drift (in future to be called No. 1) has advanced 16 ft. in 60 ft. It still continues favourable looking ground, containing small bunches of low grade ore and iron. The 400 south drift, now being run by contract, has advanced 32 ft., now in 42 ft. We cut a small streak of ore in this drift, not of sufficient size to be of any importance as yet, but so soon as the contract is completed will prospect it further. The machinery is in good working condition.

BLUE TENT.—G. S. Powers, Nov. 15: For the past week the force of men have been employed in finishing rock cuts and flumes in South Yuba claim and sinking the main cut in Blue Lead. The sinking of this cut is very tedious, on account of the heavy snow and there being a miners' feet at Sentinel, very little work has been done at mine this week, only 50 tons of the usual quality of ore having been broken. No carts have been able to go up to the mine for ore, the road being impassable through the snow drifts. It is, however, possible that the weather may clear up sufficiently to send the carts to the mine again this season. At the Board we have only dressed about 18 tons of lead and 25 tons of blende, owing to the bad state of the weather.

CAPE COPPER.—Ookiep, Capt. Lankbury and Capt. Henwood, Oct. 31: The sinking of the new shaft below the 68 goes on favourably; the bottom at the present time is worth 5 tons of copper ore per cubic fathom. The 92, east of No. 23 winze, has produced some very rich stones of copper ore since our last report, but not enough to value. The ground in the 80, north-east of No. 31 winze, has improved, and is now worth 7 tons of copper ore per fathom. The 80 north, in the eastern extremity of the 70, towards the new shaft, is yielding saving stuff. The 68, north-east of No. 31 winze, has fallen off a little in value; the present end is worth 3 tons of copper ore per fathom. Good progress has been made in driving the 58, south-east of No. 32 winze; the ground has been very favourable for driving; the present forebore still retains its former value—viz., 2 tons of copper ore per fathom. The 58, east of No. 32 winze, shows a little improvement, and is now worth 3 tons of copper ore per fathom. No. 33 winze, which was commenced in the early part of the month, has now attained a depth of 19 ft.; the first 12 ft. of this sinking was worth, on the average, 7 tons of copper ore per fathom, but below that point it gradually became poorer. There is no change to notice in the 58 south-west from shaft; the ground is composed principally of quartz, showing at times spots of copper ore. The 48, north-east of new shaft, is spotted with copper ore throughout, but not sufficient to value. The stopes throughout the mine are looking well.

SPECTARLE.—Capt. Lankbury and Henwood, Oct. 25: The ground in the incline, sinking below the 53, has undergone a favourable change since last report, and is now producing some good saving work for copper ore. The 64, east of the winze, is still in hard granitic rock. A new level has been started to drive in a northerly direction from the bottom of the winze, with a view of making communication with the incline at this level. The 53, east of No. 2 flookan course, produces occasional stones of copper ore. In the bottom of the stopes, in the 53, there is some good copper ground, but breast of same has become poor. The stopes in the bottom of the 46 fm. level is still yielding about 2 tons of copper ore per fathom.

NABARDEP MINE.—Capt. Lankbury and Henwood, Oct. 31: The 17, south-west from shaft, does not present any indications of copper ore; we have, therefore, suspended the driving, and put the men to stopes in the back of the 28 fm. level. The stopes in the back of the 28, south-west from shaft, is yielding about 2 tons of copper ore per fathom.

2 tons of copper ore per fathom. The great proportion of magnetic iron found in this lode renders the dressing difficult, and tends to lower the percentage. RETURNS.—For October, Ookiep, 5 tons of copper ore; Spectacle, 58 tons of copper ore; Nabardep, 23 tons of 17 percent. Blende of Lankbury, 27 tons per Arab, 620 tons per Hindia, 17 tons per Antonio Vincent, 48 tons per Ognore, and 590 tons per San Jose. —Arrival at Port Nolloth: The L'Esperance. —Arrival at Swanesa: The Tacna. —Sales during November: 1000 tons, at an average of 12*s*. 9*d*. per unit (assays not completed).

UNITED MEXICAN.—Edward Hay, Guanajuato, Oct. 25: Mine of San Cayetano, de la Avejera: In the cross-cut of San Lazaro, no change having occurred in the appearance of the rock, which continues very hard, we have stopped this work to-day. Last Monday we began driving on the two cuerpos intersected by San Lazaro, and this end, which is the continuation of Los Angeles, has been called San Antonio. The present bearing of this end is N. 55° W. The two lodes are composed of quartz and carbonate of lime, with loose soft ground between them. Since my last report the following changes have occurred in the ore-giving workings of the mine:—In the contraciolo of San Pablo the ore has given out entirely, and the lode has changed to soft stuff, "blandura," in consequence of which this point has been abandoned, as well as the workings on the sides of the contraciolo. 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Mining Correspondence.

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ABERLYN.—John Roberts, Dec. 10: The stopes on the great lode have improved since last week. There is no change in any other part. Our dressing operations are suspended by the frost; but, as a thaw has set in, I hope to be able to resume work again in a day or two.

BLAEN CAELAN UNITED.—J. T. Green, Dec. 10: Very fair progress has been made here during the week, considering the state of the weather. By clearing the wheel from accumulated frost every evening we have managed to keep it going, and the mine in fork. The men have finished clearing the old stuff, and are now engaged taking down a bad piece of the footwall, preparatory to sinking. This will take them until Saturday, when sinking will be commenced in a good ore lode. The lode in the stope in the back of the 30 is poor, but there is good ore in the end of the winze higher up, so that I expect a good improvement in a few feet stoping. The stope in the back of the 20 is without change. We shall commence crushing to-morrow, if the weather continues fine as now. I have had a smith here repairing and strengthening the pump connections, which had worn very badly in parts. The carrier has been sent down to-day for the new lift of pumps from the foundry.

BLUE HILLS.—S. Bennetts, F. Vian, Dec. 6: The lode in the 42 fm. level east and west end is producing some low quality tin stuff, but not of much value. In the 30 east end it is worth 15s. per fathom; and the stope in the bottom of the 30, west of shaft is worth 7s. per fathom.

BWLCH UNITED.—N. Bray, Dec. 8: You will not be surprised to be informed that, owing to the severity of the frost, our pumping-wheel is at a stand, and the men are stopped from working in the bottom level. I removed part of them to fill up a full party for driving the 80 east, and the remainder to prepare a place for depositing debris and in stoping and general work. The 80 shows an improving lode of good width and strong appearance, producing a little lead ore, and I think I shall be able to report even more favourably in a little time. The 70 is still in a large lode, but without any alteration in its general appearance to call for special remark. The stopes in the back of the 70, west of winze, are still producing good ore stuff, and the same remark applies to the stopes at the 60 fm. level.

CLEMENTINA.—John Roberts, W. Sandoe, Dec. 9: During the past month we have driven north at the 34 about 4½ fms. through a nice ore lode, worth about 15 cwt. of lead to the fathom. The south end at this level has continued hard and spare for driving, but the lode has opened wider, and we expect that it will improve for driving. The prospects for the stope are very encouraging, as we have reported for some time past. Sometimes the lode pinches up very small, and at other times it opens out wider, but taking the whole length together it is worth about 10 cwt. to the fathom. The end west from the shaft, or opposite this stope, is now driven about 2 fms. The lode is getting more regular as it gets away from the influence of the north and south lode, and is now yielding some good saving work for lead. We have made the roadside shaft ready for drawing through, and to cut the lode at the bottom in order to sink another lift, but the short supply of water caused by drought and frost has prevented us from doing any farther. The prospects for the mine are very encouraging indeed—never more so—and we hope soon to show satisfactory results. There seems now to be a great change in the weather, and we hope in a day or two everything will go on again regularly. We intend sampling 10 tons of lead this month, and should have done so but for the reasons above named.

COMBAMARTIN.—J. Harris, J. Comer, Dec. 11: The lode in the winze below the 12 fm. level has very much improved in character since we last reported, it being fully 3 ft. wide, of soft friable quartz and killas, in which we find good patches of lead, but not enough to value, but saving work for dressing. The lode has a promising appearance for meeting with a deposit of lead quickly. The lode in the north-west adit end is fully 4 ft. wide, 2½ ft. of which has a very encouraging appearance for meeting with an improved lode, as it contains good stones of lead, blende, and mundie, associated with friable spar and prany killas, and is as kindly a looking lode for meeting with lead as any miner would wish to see; the ground is also good for progress, and the men are making good speed with the driving. The ground in the adit cross-cut is without change since we last reported, meeting with little crossing of quartz and mundie in our driving.

CROOK BURN.—W. Vipond, Dec. 6: I gave Mr. Potts notice on Monday morning of the resolution of the directors about stopping the sinking till the water could be dealt with; the men had left off drawing the water on Tuesday afternoon, thinking there was no chance of beating it. John Vipond was there till Thursday morning putting all secure about the shaft top and the shop, &c. I think the directors have acted wisely to stop it for the present, as there could have been no chance of making any progress with the sinking under the circumstances.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, A. Francis, Dec. 11: The 112 east, main lode, continues to improve. The lode matrix is all that can be desired. The lead in the lode is almost solid, varying in width from 3 to 5 in. from the roof down to the bottom of the level. The ore is of rich quality, and seems likely to last with us. Taking advantage of the present advance in the price of lead we have put a set of men to work at the ore reserves in the 66. They have only been at work two days, but the results so far are highly gratifying, and, indeed, have exceeded our expectations. With the continuance of the present yield we shall be able to give a very satisfactory account of the working at the end of the month. The driving of the level at this depth will, in our opinion, soon enter a course of ore. The two cross-cuts are being urged forward. The frost has stopped dressing operations, but we have a quantity of lead daily accumulating, so that as soon as the thaw sets in we shall be very busy in this department.

DEVON GREAT CONSOLS.—I. Richards, Dec. 11: Wheal Josiah: New South Lode Shaft: In the 130 west the lode is 2 ft. wide, composed principally of capel. In the 115 west the lode is 1½ ft. wide, composed of capel, quartz, and a small quantity of both mundie and copper ores.—Wheal Emma: Inclined Shaft: In Davies's cross-cut south, at the 190 east, the ground continues tolerably favourable for driving. In the 137 east, east of Friend's cross-cut, the lode—6 ft. wide being carried—is composed of capel, quartz, peach, mundie, and some copper ore of good quality.—New Shaft, New South Lode: Nothing has been done in the 205 west since last advice, the men having been engaged fixing air-pipes, &c., in connection with rock-drill machinery. In the 190 east the lode—part carried 3 ft. wide—is worth 2 tons of copper ore, or 6l., and 3 tons of mundie per fathom. In the 190 west, driving south, the south portion of the lode has been met with and cut through, proving 2 ft. wide, and composed of capel, quartz, peach, mundie, and a little copper ore of good quality. In James's rise, in the back of the 190 west, rising is being continued by the side of the lode. At the 175 west a communication has been made with the 175, east of the railway shaft, at which point the lode is 3½ ft. wide, and worth 4 tons of copper ore, or 12l., and 4 tons of mundie per fathom. In the 175 east, in the bottom of the 175 west, the lode—2½ ft. wide being carried—is worth for length of winze (9 ft.) 2 tons of copper ore, or 6l., and 4 tons of mundie per fathom. In the 115 east the lode is 4 ft. wide, composed of capel, quartz, peach, mundie, and a little copper ore of good quality. In the 100 east, on the south part of the lode, the lode is 2 ft. wide, composed of capel, quartz, peach, and a little of both mundie and copper ore.—Railway Shaft: In the Railway shaft—now about 6½ fms. below the 175—the ground is favourable, and good progress in sinking is being made. In the 175 west the lode—5 ft. wide being carried—is composed of capel, quartz, peach, pryan, and copper ore, worth 4 tons, or 12l., and 3 tons of mundie per fathom. In the 160 west the lode is 5 ft. wide, composed of capel, quartz, peach, pryan, and copper ore; worth 3 tons, or 9l., and 5 tons of mundie per fathom. In Fox's winze, in the bottom of the 160 east, the lode is 3 ft. wide, composed of capel, quartz, peach, mundie, and a little copper ore.

D'ERESBY CONSOLS.—J. Roberts, W. Sandoe, Dec. 9: In the end driving west towards the Cobblers' lode we have just cut into some strong branches of a ar, which are letting out water freely, and in the farthest point apparently at once square up the end, and break through this wall. In the course of two or three days we hope to be able to report fully on it.

DUBBY SYKE.—William Vipond, Dec. 6: There is nothing new to report from the shaft. The sinking is going on satisfactorily. The ten men have sunk 3 fms. 8 in. since Mr. Tallentire finished. I shall have 12 men at this on Monday.

EAST LONGSTONE.—H. Harris, Dec. 6: The men are pushing on the adit with all speed; the ground is not altogether so speedy for driving, but they are making good progress, and nearing the east and west lode. Some further branches of silver gossan have been cut dipping towards the lode, and this gossan contains from assay from Mr. Bawden, Liskeard, 8½ ozs. per ton, showing how highly the ground is mineralised.

EAST ROMAN GRAVELS.—Arthur Waters, Dec. 11: We have commenced to drive south on the lode at the 97 by six men, at 12l. per fathom, lode producing good ore stuff. Three men dividing and casing the shaft from the 86 to the 97 for 7l., and to sink 3 fms. (for fork) for 6l. The 86 to drive south, by four men, at 6l. 10s. per fathom; lode 2 ft. wide, producing good ore stuff. The 75 to drive south, by four men, at 5l. per fathom, and 1l. per ton of lead ore.—Tribute: The pitch in back of the 86 south, by two men, at 6l. per ton. No. 1 in back of the 75, by four men, at 3l. 5s. per ton. No. 2 in the back of the 75, by four men, at 3l. 15s. per ton. No. 3 stope in back of the 75 south, by four men, at 6l. per ton. No. 3 stope in back of the 63, by two men, at 6l. per ton. No. 3 stope in bottom of the 50 north, by three men, at 4l. 15s. per ton. No. 3 stope in bottom of the 50 south, by two men, at 5l. 15s. per ton. No. 3 stope in bottom of the 46 north, by two men, at 6l. per ton. No. 3 stope in bottom of the 20 south, by two men, at 5l. 5s. per ton. The above nine pitches are together worth about 9 tons per fm. Tributaries pay all cost, including 1l. per ton for dressing. The very severe weather we have been having has prevented us from getting a parcel of lead ore ready for sampling this week.

EAST VAN.—W. H. Williams, Dec. 10: The level upon the cross-course is driven 15 fathoms. The end of the level is letting out a little water, and is occasionally sprinkled with spots of lead, but not of much value as yet.

EAST WHEAL LOVELL.—R. Quantrell, Dec. 10: Sevorgan shaft is looking just the same as for some weeks past. The lode is 6 ft. wide, and of a very congenial character for the district. We have nearly finished the water-wheel, and expect to put it in work next week.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Dec. 6: The lode in the 117 east is exceedingly large beyond the space of 7 ft. in the drive, of the most kindly appearance, yielding sulphur and arsenical mundie, mixed with good quality copper ore. The lode in the 105 east is carried 5 ft. wide, producing capel, spar, and mundie, mixed with ore; worth 5l. per fathom. The lode in the stopes in the bottom of the 105, east of winze, is worth 11l. per fathom. The stopes in the bottom of same level (105), west of said winze, is worth 12l. per fathom. The lode in the stopes in back of the 105 is worth about 12l. per fathom.

GLASGOW CARADON CONSOLS.—Wm. Taylor, Wm. J. Taylor, Dec. 9: The new lode cut in the 102 south is now driving on east from 3 to 4 fms. It is 4 ft. wide, a very kindly looking lode, letting out a good deal of water, and likely further to improve; now worth 12l. per fathom. This is a new lode, never seen in the mine before, the opening of which is very important. In the 102 east on north lode there is not much change; lode small, with stones of ore. In the 90 west on north lode the ground is still hard, and the lode poor. The 90 east on south lode is worth 1l. per fathom. Winze in bottom of this level to come down on the 102 east north lode is worth 8l. per fathom. We have not cut anything further in the cross-cut south at this level, which we are pushing on as fast as possible. Winze in bottom of 28 east is worth 8l. per fathom. The stopes and patches on the whole, are not looking quite so well, varying in value from 12s. to 13s. per fathom. We have had additional work done on the water-wheel, and have now it ready to work. At the 102 east, in the 102 east, we have nearly finished the water-wheel, and expect to put it in work next week.

GLENNY.—R. Rowe, Dec. 10: The lode continues to look quite as well as last

reported in the bottom level north, but south the end has come up to a small slide, and we cannot report upon the lode until we get the other side; the lode was very wide and promising up to the slide.

GORSEDD AND MERLLYN.—W. Edwards, Dec. 11: I have the pleasure of informing you that the 70 yard level east is improving, and is returning more lead to the yard than it hitherto has done for some time; we shall soon get under the ground at the 50 yard level, from which we raised a large quantity of ore. The men have driven 2½ yards since last report. There is no change in the 90. The men have nearly finished clearing up the 60 yards east, so that we shall soon be stopping here. At the tributaries' bargains in the 70 east the No. 1 is worth for lead 18 cwt. to the fathom; No. 2, 22 cwt. to the fathom; No. 3 west level 21 cwt. to the fathom.

GREAT HOLWAY.—Dec. 11: The cutting of the ground between Roskell's and level shaft is making better progress; in carrying out the operation they have come across a rib of lead ore, which improves at depth; the samples are splendid, apparently containing a good amount of silver. We hope to get the ground completely cut by the end of the month; we can then raise ore from the 80 yard level east.—Garden Shaft: The stoping of No. 5 looks well, and likely to open up a rich piece of ground. There is no other change. We have a good pile of lead and blende stuff on surface.

GREAT LAXEY.—F. Reddcliffe, Dec. 10: Deep Mine: Since last report the 247, north of Welsh shaft, has been holed to the winze, and the men recently engaged in sinking that winze placed to sink another still farther north in the 235. In the vicinity of this winze the lode is going down 40l. to 60l. per fathom, and we hope it will be found equally rich going down. The lode in the 220 end is still not so good as we hoped to have had it at that point, seeing there was much better lode in the level above it. We expect, however, that the squeezed up spot is of but small area, and that a much richer lode is close at hand; present value 15l. per fathom. The 210 end is near the slide, and has suddenly become worth 40l. per fathom.—Dumbell's: This shaft is now down to the required depth for another level (the 230), and we have started the men first to cross-cut fully through the lode to prove its character and value, and when that is done we shall at once commence to drive both north and south. The ore in the 200 end has not been quite regular, but it is of much improved appearance at the present time, and worth 25l. per fathom. The part of the lode carried in driving in the 135 end is unproductive, and the end in the 170 of but small value at present. The cross-cut in the 140 end is driven about 3 fms., but without meeting with anything as yet. In the 125 the lode has made a slight bend to the west, and the whole of it is not taken down quite close up to the end, but a short distance back; it is worth 18l. per fathom. The 110 end is not quite clear of the d'sordered ground. It will be satisfactory to you to know that the 85 end has opened into good ore, the present value of which is 40l. per fathom. The present position of this end agrees with the southern extremity of the first of the last two important runs of ore ground driven through in the 110, and is no doubt a continuation of it upwards. One of the levels still above it must be taken up as soon as possible. There is no other material change throughout the mine.

GREAT RETALLACK.—J. Harris, Dec. 6: The ground in the shaft is again stiffer than when I last reported, but it is changing in character, having a more gossany appearance, and I am thinking we are getting near the lode. The shaft is now down 9 fms. 1 ft., and I have to-day re-set it to sink at 35s. per fathom for 3 fms., at which depth I contemplate having a small pit made preparatory to sinking below, as we shall have to sink about 10 fms. below to reach the 30 fm. level, which with favourable ground will take a little more than two months to accomplish.

GREEN HURTH.—W. Vipond, Dec. 5: Swan's Shaft: It has turned out to be the limestone in this that we got at the end of last week. There is no mistake about it since the men got fairly broken into it. They have got through the first thick part of this, and are now in what we call the back bed—a sort of shaly woody post, about 18 in. thick. If we do not get clear of some of the water after we are through this we shall very likely have it with us all the way down, and it is getting very troublesome.—Vipond's Sump: The south end of the 30 fm. level from this continues to yield about 9 tons of ore per fathom; it keeps going on quite steadily. The north end of the 30 is yielding about 1 ton of ore per fathom.—Robinson's Sump: The men are finishing off with this at 13 fms. down. I expect they will be ready to begin driving south on Monday to meet the north end of the 30 if the broken vein stuff they have laying off on the west side is the same as what we are driving in north we shall communicate with the north end. We have all covered with snow yet, but rather like a change this morning.

GREEN HURTH.—W. Vipond, Dec. 9: Swan's Shaft: This is now in the limestone, but we see no abatement of the water yet. It is making 100 gallons per hour. I have set these six men a bargain to sink 1 fm., at 22l. per fathom. This ought to prove whether we are going to get clear of any of the water in the limestone; if we should not, I really think it would be better to let it stand till the pump is in. Sunk last month, 1 fm. in plate and 1 fm. 6 in. in limestone.—Vipond's Sump: The south end of the 30 from this is yielding about 9 tons of ore per fathom. Clear plate on the east side. It is set to sink to drive, at 84s. per fathom. Driven last month, 5 fms. 5 ft. The north end of the 30 is yielding 1 ton of ore per fathom, and set to two men to drive, at 105s. per fathom. Driven last month, 1 fm. 4 ft.—Robinson's Sump: We have left off sinking this. Sunk last month, 3 fms. 2 ft. I have set the six men a bargain, to drive south to meet the north end of the 30, at 80s. per fathom. We have no ore in this at present, as the sump has got altogether into limestone and limestone rider, the thing we had the ore in having haded off to the west of sump at bottom. We shall get into it in driving in a shift or two, and if it is the same we are driving in from the first sump we may soon get ore, and be making progress towards hoing. We estimate our present stock of ore—dressed, undressed, and in course of dressing, at 90 bins.

GRIFFIN.—C. Kneebone, Dec. 10: The 15 north-east, going towards the Griffin lode, is in rather easier ground, and faced with lead in the cleavages; I expect a few feet more will take us into the lode. The rise over this level is making good progress; lode composed of quartz, lime, spar, gossan, and good stones of lead. The 10 north is going forward in a large powerful gossan lode, now fully 6 ft. wide, with rich stones of lead ore throughout, and worth to-day 35 cwt. to the fathom. No. 1 stope is in closer ground, and the lode is smaller, worth 12 cwt. of lead ore to the fathom. No. 2 stope, south of shaft, is without change, worth to us lead ore to the fathom; we have been engaged here for some days putting in still, footway, &c. The main adit level north, on the Griffin lode, is producing lead ore for 6 ft. in width from the western or footwall, but from appearances I think the best part of the lode is yet standing on the east side, and we are preparing to cross cut in that direction, as the strong feeder of water and rich bunches of lead there indicate that we are in close proximity to a new lode coming in from the Cwm Llanerch Mine, and I have every confidence that we are entering a rich course of ore ground at this point. The new adit level, to intersect the Cwm Llanerch lode to the east, is making good progress. The frost has been the cause of some delay, and surface operations have been suspended since my last report, but to-day a favourable change has set in.

HERODSFOOT.—R. Temby, Dec. 11: The shaftmen are still engaged cutting ground, putting in timber, and fixing drawing-lift, &c. On Saturday last the following bargains were set:—The 205 to drive north, by two men, at 70s. per fathom; lode is large, but rather disordered, producing about 6 cwt. of ore per fathom. There is a part of the lode standing in the footwall which shall be taken down this week. The same level to drive south by two men, at 50s. per fathom; this end appears to be out of the disturbed ground, and the lode is to value at present. The same level to drive north on the western part, by two men, at 60s. per fathom; lode 20 in. wide, and worth 6 cwt. of ore. No. 1 stope, in the back of this level, to four men, at 30s. per fathom; lode 6 ft. wide, worth 15 cwt. of ore per fathom. No. 2 stope north, to two men, at 30s. per fathom; lode 3 ft. wide, worth 12 cwt. of ore per fathom. The lode opened at the 70 is still worth 10 cwt. of rich ore per fathom. At surface our work is rather slow, owing to the frost. In the last five weeks our water has very much fallen off. The water in the river is not one-third of the usual quantity, consequently we cannot draw the stuff we are breaking, and we are depending on our underground water for crushing, &c.

HINGTON DOWN.—T. Richards, Dec. 11: The drivages on the course of the lode both east and west of the adit south continues to produce rich stones of copper ore. The cutting of ground for the shaft is progressing favourably. The weather is improving, and we shall soon commence sinking the shaft from surface.

LADYWELL.—A. Waters, Dec. 11: No change has taken place worthy of remark in either the adit or 20 since my full report.

LEADHILLS.—Dec. 10: The agent reports that the 20 fm. level going south on Brown's vein continues to improve, and is now worth fully 8 tons per fathom—average of fourfms.

LOMAX (Old Wheal Rose).—W. Argall, Dec. 7: The men have repaired the roof of the account and changing house, put up new door and windows, broken over the pile of silver lead stuff, and now it looks well. We have commenced to put footway at ladder-road to shaft, to the half level. The men have also opened on the road in the cliff; it is between 3 and 4 ft. wide, with a beautiful gossan, which the county analyst gives containing 7½ ozs. of silver to the ton of stuff. You will be pleased to see this lode.

LOVELL.—J. Frisk, Dec. 11: The lode in the 40 fm. level, east of Homan shaft, is 7 ft. wide, worth 12l. per fathom; this end is considerably in advance of any other point in the mine eastward, and the back is standing whole to surface, which we expect will yield a very large amount of fair quality tin stuff. The lode in the stope in the bottom of the 40 is 7 ft. wide, worth 12l. per fathom. The lode in back of the 40 is 12 ft. wide, worth 20l. per fathom. The lode in bottom of the 30, at the engine-shaft, is 10 ft. wide, worth 18l. per fathom. We are now in a position to send to surface a much larger quantity of tin stuff than heretofore, and the stamping and dressing is going on satisfactorily.

MELLANEAR.—John Gilbert, Dec. 10: Gundry's Shaft: The 40, west of shaft, was driven last month 1 w. 0 ft. 6 in.; the lode is 3 ft. wide, and producing ½ ton of copper ore per fathom. The 50, driving west of cross-cut, on the south-east part of the lode, was driven 4 ft. 6 in.; the lode is 3 ft. wide, and producing 1 ton of ore per fathom. The 60 fm. level, west of shaft, driving east on the south-west part of lode, was driven 1 fm. 5 ft. 6 in.; the lode is 2 ft. wide, and producing 1 ton of ore per fathom. The 70, west of shaft, was driven 5 fms. 1 ft.; the lode is 3 ft. wide, and producing 2 tons of ore per fathom. The 70, west of shaft, driving east on the south-east part of lode, was driven 2 fms. 5 ft. 6 in.; the lode is 4 ft. wide, and producing 2 tons of ore per fathom. The 80, west of shaft, was driven 3 fms. 2 ft. 6 in.; the lode is 5 ft. wide, and producing 4 tons of ore per fathom. The 90, west of shaft, was driven 4 fms. 2 ft.; the lode is 4 ft. wide, and producing 2 tons of ore per fathom. The 100 fm. level, west of shaft, was driven 2 fms. 5 ft.; the lode is 5 ft. wide, and producing 3 tons of ore per fathom. The 100, east of shaft, was driven 3 fms.; the lode is 3 ft. wide, and producing 2½ tons of ore per fathom. We calculate to cut the lode in the 110 cross-cut, north of shaft, by driving about 3 fms. We shall also begin at once to cut pit at this level, divide the shaft, and put in footway, &c., below the 108. The 108, west of shaft, was driven 1 fm. 2 ft. 6 in.; the lode is 3 ft. wide, and producing 1 ton of ore per fathom. The 100 cross-cut, south of the shaft, was driven 5 fms. 6 in.; the ground is favourable for driving, and the cross-course is still yielding stones of lead ore and mundie. The winze in the bottom of the 90, east of Gundry's shaft, was sunk 8 fms. 0 ft. 6 in.; the lode is 4 ft. wide, and producing 3 tons of ore per

fathom. The mine in the bottom of the 80, west of Gundry's shaft, was sunk 4 ft. 6 in.; the lode is 5 ft. wide, and produces 3½ tons of ore per fathom. The rise in the back of the 20, west of Gundry's shaft, was put up 2 fms. 2 ft. 6 in.; the lode is 2 ft. wide, and producing stones of lead ore and blende, and a little saving work for copper ore. The rise in the back of the 60, on the south-east part of the lode, was put up 2 fms. 2 ft.; the lode is 3½ ft. wide, and producing 1 ton per fathom. The rise in the back of the 70, west of Gundry's shaft, was put up 2 fms. 3 ft. 6 in.; the lode is 3 ft. wide, and producing 2 tons of ore per fathom.

MINERAL CORPORATION OF GREAT BRITAIN.—William Bennetts, Dec. 10: HARRY, HIGH HARRA, and GREAT DEESBY: In stripping down the lode in No. 3 add 1 in. glad to find it is turning out more lead and blende ore than I expected; it is worth fully 1½ ton to the fathom. At surface the frost has stopped our dressing operations, but from a change in the weather we now have. I hope we may be able to resume dressing the lead and blende ores on Friday. At Great D'Eresby deep adit the frost has somewhat impeded our progress, as our water courses have been frozen, which has cut off at times the supply of water for the engine. During the week the adit has been advanced 1 in. 3 ft. 11 in.

MONYD GORDU.—J. G. Green, Dec. 9: I beg to report that the following bargains were set on Saturday, the 6th inst., to be continued for two months: The 34 to drive west, to six men, at 110s. per fathom; this level will be driven direct according to lines to the perpendicular of the ore-ground, gone down in the sole of the 24, and there, according to dialling, 13 or 14 fms. to drive to reach this point. No. 2 stop, in back of 34, is suspended for the time, so as to get the level driven in clear. No. 1 stop set to six men, at 70s. per fathom; lode worth 1 ton of lead and ½ ton of blende per fathom. A cross-cut to four men to drive north to a point 5 fms. east of slide (or south counter lode, at 60. 10s. per fathom; the object here is to prove the lode to full width. The 24 to drive west, to six men, at 70. per fathom; the lode is a very fine one, open and masterly, and for the part carried (5 ft.) is worth 1½ ton of lead and 1½ ton of blende per fathom, being full of veins in a hard crystallized form, makes it a tight end for progress. A rise in the back of the 24, overwize, on cross-bank, to two men, at 30. per fathom; lode worth ½ ton per fathom. To sink a winze below the 12 west in the new run of ore ground to six men, at 100. per fathom for 5 fms. certain; the lode here is of the same character as in the level below, winze at present 18 cwt. per fathom for lead and saving work for blende; it is worth 7 fms., leaving 5 fms. to sink to the 24. To stop the back of the 12 overwize to six or eight men, at 70s. per fathom and 20. for raising lode worth ½ ton per fathom on an average for length stopped. The tramming and filling of all the stuff in the mine to four men, at 17s. 6d. per hundred skips. Severe frost has prevailed during the past week, and all our machinery has been at a standstill excepting the pumping-wheel, which was set going again on Sunday after being standing for three days. I hope to get the 34 clear by to-night, and work resumed in that level. I am glad to notice that the price of lead continues to rise, and I have no doubt but that our next parcel will realise at least 15s. per ton. Taking into account this fact, and the favourable appearance of the mine at all points, it is most encouraging to all concerned. We have from 12 to 14 tons of ore in the bin towards our next sumping.

MORFA DU.—T. Mitchell, Dec. 11: The shaftmen are getting on very well in sinking. We have just put on the last pump to complete the draft. The ground in the cross-cut at the White Rock shaft continues stiff, and rather spare for driving.

NEW BRONFLOYD.—Thomas Kemp, Dec. 11: Setting Report: No. 3 Shaft, North Lode: The part of the lode carried by the 121 end, west of winze, as within the last few days showed a more favourable appearance, composed of killas and spar, at times yielding excellent stones of lead ore, and from the general character of the lode we ought to have a good improvement here, therefore I think it advisable to extend the driving some distance further before stripping the lode to full width; this bargain is reset to two men, at 80. per fathom. The stop to the east of winze and over this level is let to eight men, on tribute, for two months, at 160s. per ton, to make the ore marketable; the men are still employed in filling up the workings, which work has taken more time than expected, however will be completed in two or three days, when they will begin stopping the lode worth from 15 to 18 cwt. of ore per cubic fathom. Two men to open and sink a small arch of ground standing in the sole of the 56, west of winze, at 80. per ton, to make the ore marketable. Six men to stop the lode in the bottom of the 52, west of shaft, worth 1½ ton of ore per cubic fathom. Middle Lode: The part of the lode opened on by the 73 end, west of No. 2 cross-cut, I am sorry to say is not so productive as when last reported, composed of killas and spar, carrying good strings of ore, now worth 1 ton per fathom; I think this falling off is only temporary, and in a short time the lode will again improve to former value. The intermediate level of winze, between the 52 and 73, is the part of the lode turned more to the north, consequently the level is being driven obliquely through the lode, the object of which is to ascertain should the productive part of the lode be in that direction; this bargain is reset to four men, at 100. per fm., including haulage and tramming of stuff.

NORTH D'ERESBY MOUNTAIN.—Dec. 9: There is nothing calling for any remark since last week's report; the lode still maintains its most productive appearance—5 ft. wide, containing lead throughout, the whole of which we are saving for the dressing-floors.

Dec. 11: I am pleased to inform you that the lode in No. 2 adit is looking well, worth fully 25 cwt. of lead to the fathom.

NORTH TREKERRY.—Martin George, Dec. 11: The ground in Doctor's engine-shaft has been tight and difficult for sinking, being mixed with a great deal of spar; but it is now cleaner, and the men are getting on much better. The lode in the 36, driving west of engine-shaft, is 4 ft. wide, composed of quartz, mundle, and good stones of copper ore. The lode in the 24, driving west of the cross-course is 3½ ft. wide, and worth ½ ton of copper ore per fathom. The lode in the winze, sinking below the 24 is 4 ft. wide, and yields copper ore to save. The lode in the shallow level, driving west of the cross-course is 3 ft. wide, and worth 1 ton of copper ore per fathom. The lode in the stope in the bottom of the shallow level is 3 ft. wide, and yields 1½ ton of copper ore per fathom. We shall sample on Tuesday next a good parcel of copper ore.

PANDORA.—H. Nottingham, Dec. 11: The 33, driving south on new lode, is yielding less lead and more blende than when last valued; the lode is looking very kindly for an improvement, and is wider than it was. The 33 south, on Goddard's lode, has improved very much in appearance; the lode is opening and filling with blende, blende, and a little lead, which I fully anticipate will improve as we advance. The work of cutting lode, &c., in the 33, to have room enough for sinking tackle clear of the tramway, is well on, and we shall very soon commence sinking and running out for cistern, which will be required to take up the water of the 33 fm. level. We made a substantial dam in each level by which we may regulate the water to the cistern. The stopes throughout the mine are as last valued. We have had our crusher all to pieces, and are now busily engaged fitting it up again. It had gone very much out of repair. The frost has not left us, but it has ceased freezing, and we have to-day resumed the jiggling and hoisting in day or two to resume the engine.

PANT-Y-MWEN.—Enoch Parry, Dec. 10: We have for the present suspended the driving of the 15, east of Modlyn shaft, and put the men to assist in preparing that shaft to receive the new machinery. There is a good run of lead ore just over the end of the said level, from which we have raised about 20 tons in the last few weeks, and by extending the end a little further we shall strike it as it dips down before the end, but by extending the end we may tap more water than we could keep out with the present machinery. As soon as the new engine is fixed we shall go on with this level in a good lead bearing lode. The rise in the sole of this level to meet the shaft where the lode passes through the shaft is in a very hard bar of ground, but I am glad it is only 2½ fms. through to the shaft. This rise we shall try our best to get through in from three to four weeks, and in the meantime shall start to sink the shaft below the level. The lode in the stope above this level is worth 2 tons of lead ore to the fathom, and is set to four men, at 32s. 6d. per ton for the lead ore. This is a new piece of ground, and is whole up to the adit level, in places above that level. This is a very valuable addition to the mine, and we have a long distance yet to drive in this direction, and it will be a good mine of itself.—mean east of Modlyn's Shaft: The lode in the winze, sinking below the 15, east of Griffith's lode, is worth on an average, as far as we have cleared the bottom of the level (about 5 fms.), 2½ tons per fathom. The best places are worth 50s. per fathom, and this in ground easy to be wrought. This lead ore can be raised from 20s. per ton when we have Modlyn shaft down 15 fms. deeper, and this we will do with all possible speed. We have six tributaries in old workings raising lead ore at 40. per ton, and earning fair wages. We have proved the lode below the deep adit level for 130 fms. in length, and are pleased with the improvement in character and productivity as we go down.—Deep Adit Level: We have had first-rate speed in clearing and raising this level from the mouth up to Bell air-shaft, a distance of 425 fathoms. There is rather a troublesome place to pass in that shaft, but we shall overcome it by the end of the week, and proceed on towards the mine. We are still doing our best to get into the adit in the south shaft, but the ground being very rotten, and what appears to have been a wide lode at that level has, I am sorry to say, compelled us to put in very strong timbers to secure ourselves before attempting to clear the debris which has fallen from above. However, we see now that we are down nearly to the depth of the level, and in fact in a day or two it is about 170 fms. from the Bell air-shaft to south shaft, and we are pretty certain that the obstruction is from those shafts, and shall do our best from both points to meet it, and thus overcome and remove what has been a great hindrance in times of floods. We have the 25 tons of lead ore to be sold to-morrow in the bin, and as soon as we know the buyer will send it off. This we have raised and washed in the last few weeks, notwithstanding the severe frost, which almost stopped washing until we utilised the waste steam to heat water for the floors, so that in future we can go on in all weathers. We have now 10 tons more at surface ready for dressing, and a few tons underground. We can raise and sell 25 to 30 tons per month. In the meantime, we are fixing the new engine, and sending down Modlyn. We can see our way clear to do this, and with any important improvement we could raise more. I am very glad to learn that you have agreed for a 40-horse power Robey's patent pumping and winding engine. I have had 5½ years' experience with one of them, which I found to be the most powerful (according to size), the most economical in fuel, and handy for both purposes that ever I saw. As soon as I get the ground plan I will prepare the foundations without delay. When we get into full working order with the new engine and miller we shall make large profits, and any shareholder who sells his shares at 22. will lose by so doing. We are making improvements in the floors, and shall soon be in position to work the lead ore cleaner, and shall get a better price.

PARYS COPPER.—T. Mitchell, Dec. 11: I am glad to inform you that appearances in the 90 cross-cut south are improving every day. The forebrest is producing rich stones of copper ore, and we expect soon to have something good to report. The 90, west of cross-cut, is going into nice looking ground, and good progress is being made in the driving. The pitches continue to yield a good quantity of ore.

PATELEY BRIDGE.—C. Williams, Dec. 11: I have nothing new to inform you of this week. All points maintain their respective value as per my report of last week. Dressing and melting progressing very satisfactorily.

PENHALG.—S. Bennetts, P. Vian, Dec. 6: The lode in the 70 east end is small, and not of much value. In the 93 west it is worth 54. per fathom. The north lode, east of the 50 cross-cut, is also small; and the same lode, east of the 30 cross-cut, north from the flat-rod shaft, is 8 to 9 in. wide, and containing some good tin stuff.

PENNANT.—Dec. 11: I am glad to say the mine continues to improve. We are urging on the driving in the 60, feeling sure a good section of profitable ground will thus be opened up.

PHENIX AND WEST PHENIX UNITED.—John Truocott, H. Harvey, Jos. Hoaking, Dec. 10: Setting Report: Old Sump-Shaft: The 140 to drive west, by four men, at 40. 10s. per fathom; the lode presents a promising appearance, and yields a little tin, but not sufficient to value. Stripping out the south part of the

lode in the 130 west, by six men, at 60. 10s. per fathom; the lode at this point is very large, but presents unproductive. We have one stope in back of this level working by eight men, at 60. 10s. per fathom; the lode is 14 ft. wide, and worth 47. per fathom. This stope has much improved in appearance. The 120 to drive west, by four men, at 100. per fathom; lode worth 60. per fathom. One stope in back of this level, by six men, at 4s. 6d. per ton, worth 25s. per fathom; the south part of the lode being carried is 10 ft. wide. The stope in the bottom of the 110 west, by eight men, at 3s. 6d. per ton, worth 300. per fathom; we are carrying the south part of the lode 15 ft. wide. Rising in the back of this level, on the granite, by two men, at 100. per fathom; we expect shortly to hole to the winze above. The 100 to drive west, by four men, at 100. per fathom; in driving on the course of the lode we have just intersected west of the small cross-course. We have two stopes in the back of this level—No. 1, by six men, at 6s. 6d. per ton; lode 10 ft. wide, and worth 25s. per fathom. No. 2, by six men, at 3s. per ton; at present stripping out the north part of the lode, which is worth 120. per cubic fathom. The 80 to drive west, by two men, at 80. per fathom; this end has just intersected the lode west of the small cross-course, producing saving work. The 60 to drive west, by two men, at 40. 10s. per fathom; this end also intersected the small cross-course, but not yet through. The stope in the back of this level, by two men, at 2s. 5s. per fathom; lode worth 60. per fathom. The 50 to drive west, by two men, at 50. 10s. per fathom, on the granite by the side of the lode. No. 1 stope, in back of this level, by four men, at 4s. per ton; lode 10 ft. wide, worth 16s. per fathom. No. 2 stope, in the back of this level, by four men, at 4s. 9d. per ton; lode 10 ft. wide, worth 15s. per fathom. The stope in the back of the 40, west of West's shaft, by four men, at 3s. 6d. per ton; lode 9 ft. wide, and worth 15s. per fathom. No. 1 stope, east of West's shaft, by six men, at 4s. 15s. per fathom; lode 15 ft. wide, worth 50s. per fathom. No. 2 stope, east of West's shaft, by four men, at 2s. 15s. per fathom; lode 15 ft. wide, worth 50s. per fathom. No. 3 stope, east of West's shaft, by four men, at 3s. 5s. per fathom; lode 12 ft. wide, worth 24. per fathom. The 20 to drive west, by the side of the lode, by four men, at 30. 10s. per fathom.—West Phoenix: New Engine-Shaft: To cut out the lode in the 112, west of shaft, by four men; lode producing a little tin, but not to value. The stope in back of the 100, west of shaft, by six men, at 3s. 6d. per ton; lode 12 ft. wide, worth 36s. per fathom. The stope in the back of the 100, east of shaft, by four men, at 4s. 6d. per ton; lode 7 ft. wide, worth 17s. per fathom. The 60 to drive west, by two men, at 2s. 5s. per fathom; lode 6 ft. wide, producing a little tin, and having a very promising appearance. The 50 to drive west, by two men, at 50. per fathom; lode 6 ft. wide, worth 100. per fathom. No. 1 stope, in back of this level, by four men, at 25s. per fathom; lode 5 ft. wide, worth 12s. per fathom. This is a great improvement. No. 2 stope, in back of this level, by two men, at 15s. per fathom; lode worth 90. per fathom. The 40 to drive west, by two men, at 50. 10s. per fathom; lode 8 ft. wide, worth 5s. per fathom. The stope in back of this level, by four men, at 4s. 6d. per ton; lode 10 ft. wide, and worth 25s. per fathom.—Stove's Shaft: The 50 to drive east, by two men, at 70. per fathom; lode worth 60. per fathom. No. 1 stope, in back of this level, by four men, at 30. per fathom; lode worth 70. per fathom. No. 2 stope, in back of this level, by four men, at 60. per fathom; lode worth 70. per fathom. The stope in back of the 40, by four men, at 20. 10s. per fathom; lode worth 70. per fathom. Stove's adit to drive east of the cross-cut, by two men, at 70. per fathom; lode 6 ft. wide. We set on Saturday seven pitches, varying from 6s. to 13s. 4d. in 10. for tin and copper. The stopes generally are looking remarkably well, and from the large size of the lodes great quantities of tinstuff are now being raised, which will in every probability continue westward from the present workings, in which direction the tin ground is extending.

REDFORD KILN.—J. B. Manager's Report: In handing you my report for the meeting to-morrow I have much pleasure in being able to say that our prospects are much more encouraging now than they were at the time I wrote my last detailed report, as not only has the price of ores advanced in the meantime sufficiently to enable us to work some points in the mine at a profit that could only at that period be carried on at a loss, but we have also succeeded in reaching other points of still greater importance which were then only in perspective, and which I am glad to say have so far resulted, and are likely to continue to result, as satisfactorily as we ever anticipated. The 72 has been driven east of shaft, by four men, at 30. per fathom; lode worth 100. per fathom. The 60, below the 50, and by this communication both levels have been thoroughly ventilated, and we have been enabled to commence stopping the ore ground between the two. The 23 has been driven a considerable distance west from the eastern shaft, and has within the past week reached the ore ground discovered in the 10, from which we have obtained the greater part of the past year's returns. The lode in this level (23) looks exceedingly well, and judging from present appearances I have no doubt that it will far exceed in produce the 10 above it. This is a very important point, as being so shallow and having no connection with the runs of ore ground in the western section of the mine, it may safely be regarded as a separate and distinct bunch of ore standing in whole ground from the 10 downwards. But the most interesting feature of all is the promise of success attending our operations in driving the 10 east on the south part of the lode, and which continues to run in the direction of Frongoch Mine; this drive has been carried on for several months past with some little doubt as to its continuance, as the old workings east of this point have taken a much more northerly course, but sufficient has now been done, and the prospects are such as to satisfy us that this new level is the ore-producing part of the mine, and has yielded enormous quantities of lead and blende in the adjoining mine (Frongoch). The stopes throughout the mine are looking fairly well, and our prospects, on the whole, have considerably changed for the better, so much so, that when considered in connection with the improved price for ores I have no doubt that during the current year, instead of making a loss, we shall be able to show a very satisfactory profit.

ROMAN GRAVES.—Arthur Waters, Dec. 11: The 125 cross-cut is driven 1 fm. 3½ ft., but is not through the caunter lode yet. The 110 north is worth 1 ton per fathom. The 100 south is worth 1½ ton per fathom. The 80 south 2½ tons per fathom. The 50 south has improved this week, worth to-day 2½ tons per fathom. The stopes are producing ore as for some time past. We have to-day sent out samples of 100 tons of lead ore for sale on Thursday next.

SOUTH CONDRURW.—W. Rich, W. Williams, H. Abrahams, Dec. 8: The 93 east and west worth 120. per fathom. The 80 east is worth 90. per fathom. We have not yet completed cutting trip-plat at the 80, at Plantation shaft. The west of this shaft is worth 90. per fathom. The lode in the 70 west is much improved, and looks as if it will be a good one, if it comes to a cross-course. We hope this is so, as it will enable us to easily cross south, to intersect Wheal Grenville lode. The 70, east of King's, is worth 70. per fathom. The 60, west of Plantation, yields low quality tinstuff. The 50, east of King's, is worth 80. per fathom. The lode in the back of this level is worth 120. per fathom.

SOUTH DAREN.—Henry James, Dec. 11: The 110 drivings are being pushed on with all speed, and good progress is made, though they are hard, and in a good mineral stratum. I am pleased to be able to report that in each forebrest there is a fair quantity of tin, which has been secured, and is strongly intermingled with lead for the full width of the level (5 feet), with every appearance of further improvement in value as we advance. The east end is worth 100. per fathom. The west end is worth 200. per fathom. The lode in the 100 west will be stripped down when the end is a little further on. The stopes in this level continue about the same in value as reported last week. The lode in the 90 end will be taken down and valued next week. The winze and stopes in this level have no remarkable change in the lode. The stope in the 80 is worked through to the 70 level, and the men are removed to points below. The tribute pitches are producing ore in fair quantities, and the lode has been improved, and is strongly intermingled with lead for the full width of the level (5 feet), with every appearance of further improvement in value as we advance. The east end is worth 100. per fathom. The west end is worth 200. per fathom. The lode in the 100 west will be stripped down when the end is a little further on. The stopes in this level continue about the same in value as reported last week. The lode in the 90 end will be taken down and valued next week. The winze and stopes in this level have no remarkable change in the lode. The stope in the 80 is worked through to the 70 level, and the men are removed to points below. The tribute pitches are producing ore in fair quantities, and the lode has been improved, and is strongly intermingled with lead for the full width of the level (5 feet), with every appearance of further improvement in value as we advance. The east end is worth 100. per fathom. 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for sale late in the day. York, A (where the traffic showed a decrease), dropped from 120 to 118, and in Caledonian, Berwick, North British, and Great Western the fall was not less than 1½ to 1¾.

THURSDAY.—Many have an idea that in 1880 a much larger business will be done in foreign bonds, even in those still discredited, and large parcels are bought daily from original holders who have long given up hopes of seeing any dividend. In this class of "security" are Greek, Honduras, Costa Rica, Ecuador, Paraguay, Peruvian, San Domingo, and Venezuelan; 10000 stock of which on an average would cost about 1000. Home railways were dull throughout the day, and close flat. In Caledonian and North British the fall was not less than 2½.

FRIDAY (Opening).—Last night's fall in home railways has induced heavy selling orders from the country, which cannot be very easily executed owing to everybody's attention being directed to carrying over. Contingents are stiff, ranging in the heavy lines from ¾ to ¾. Caledonian and North British are very flat, both being pressed for sale at ¾. Erie shares are up to 84½; the notice of the Atlantic and Great Western Committee enlarging the time for applying for the new bonds (at the instance of the Stock Exchange Committee) has had a salutary effect, and the bonds are from 1 to 1½ better. Parys Copper, 16s. to 18s.; Wheal Crebor, 7½ to 7¾; Ruby, 4½ to 5; Fitzstaff, 1¼ to 1½; Don Pedro, ¾ to ¾. Two o'clock.—A large proportion of the accounts in home railways having been adjusted prices are better. Brighton, A, have recovered from 131½ to 132½; and North British from 76 to 77½. Egyptian United are 51½ to 51¾. Turks are dull at 9¾ to 9½. Dover, A, are carried over at 116½ against 121½ last account; and North British at 76½ against 84½ last account. York, A, were continued at 122½, but to-day at only 117½. During the same period Midland have receded from 135½ to 132½. Four o'clock.—Railways have become particularly flat, and in many instances are even lower than in the morning, although contingents varying from ¾ to ¾ have been added to the price. North British from being 78 down to 76½, and Caledonian are 39½, after being 101. Brighton, A, are now 131½ to 131¾, and Dover, A, 116½ to 117. Egyptian United, are down to 51. Nouveau Monde, ¾ to 1½; Cardiff and Swansea Colliery, 1¼ to 1½; Chapel House, 1¼ to 1½; Midland, 132½ to 133; North-Eastern, 146½; District, 80½; Grand Trunk Ordinary, 14½ to 14¾. **FREDERICK R. KIRK.**

Mr. THOMAS THOMAS, MINERAL AGENT AND ASSAYER, COPPER ORN YARD, STRAND, SWANSEA.

Sales and Purchase of Minerals and Metals arranged. Assays and Analyses carefully conducted. References given.

C. A. SCOTT, METAL AGENT AND BROKER, 7, PARADE, BIRMINGHAM.

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FOR COPPER, TIN, LEAD, &c., apply to—
Messrs. FELL, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, DEC. 12, 1879.			
IRON.	£ s. d.	£ s. d.	
Pig, com. f.o.b. Clyde.	2 19 3	0 0	
" Scotch, No. 1.	3 0 0	2 5	
Bars, Welsh, f.o.b. Wales.	6 5 0	6 7 8	
" in London.	6 15 0	7 0 0	
" Stafford.	7 17 6	8 10 0	
" in Tyne or Tees.	6 15 0	7 0 0	
" Swedish, London.	9 10 0	—	
Rails, Welsh, at works.	6 10 0	6 15 0	
Sheets, Staff., in London.	9 0 0	9 5 0	
Plates, ship, in London.	8 0 0	8 15 0	
Hoops, Staff., in Lon.	7 15 0	8 0 0	
Nail rods.	—	—	
STEEL.			
English, spring.	13 0 0	19 0 0	
" cast.	30 0 0	40 0 0	
Swedish, keg.	13 0 0	—	
" fag. ham.	15 0 0	—	
LEAD.			
English, pig, common.	18 5 0	—	
" L.B. (nom.)	18 10 0	—	
" sheet and bar.	19 0 0	19 5 0	
" pipe.	19 5 0	—	
" red.	20 0 0	—	
" white.	30 0 0	—	
" patent shot.	21 0 0	—	
Spanish.	18 0 0	—	
NICKEL.			
Metal, per cwt.	15 0 0	18 0 0	
Ore, 10 per cent. per ton.	20 0 0	25 0 0	
QUICKSILVER.			
Flasks, 75 lbs., war. (nom.)	7 0 0	—	
SPELTER.			
Silesian.	20 2 6	20 5 0	
English, Swansea.	19 0 0	—	
Sheet zinc.	25 0 0	—	

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1X 6s. per box more than 10 quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—So many speculators having such great interest in the maintenance of the markets there has at times been considerable desire manifested to enhance the value of the various metals, but only in a few instances have they been successful, for the genuine demand does not permit of any further rise in prices. To form an accurate opinion of the state of trade too much importance should not be placed upon the increase in value, but the quantities consumed should be chiefly taken into consideration, as the first case may only be brought about by speculation, and consequently it forms little or no reliable method whereby a correct estimate can be made of what is doing; but the latter course has undoubtedly proved the best for discovering the condition of the trade during the last few months, when prices have been rising rapidly, to the detriment of the regular bona fide trade. The question of supply is one that must necessarily have an important bearing upon the future of the markets. It is true in some instances it has been totally disregarded by speculators, who have purchased merely for the sake of purchasing, and without giving the slightest heed to the real state of the trade, but as stocks in many cases have repeatedly increased, thereby showing that the production is in excess of the consumption, there seems but little probability of the enhanced prices of such metals being for any length of time maintained. It is true that during the last few years the consumption of most metals has increased, but yet the supply has been permitted to get so much in excess of it that producers have reaped as yet but slight benefit from the extra demand. Some may argue in behalf of the maintenance of present quotations that prices are still low compared with former periods, and this appears to be the strongest ground they could build their views upon; but, notwithstanding that the argument is an undeniable fact, still even during the present year, when stocks have been less than they are at the present time, sellers have had the greatest difficulty to obtain prices much below those now ruling. The position of tin and lead is doubtless better than other metals, and their improvement in price appears to be more in accordance with the standard rule of supply and demand.

COPPER.—In our last week's review of this metal we have based our calculations of a fall in value upon its statistical position, and those who have read our remarks from time to time with attention well know that this has ever been our rock of defence. We prefer to have something solid upon which to rest rather than a drifting sand, which might sink or disappear at any moment. The course we have hitherto pursued we think is the best and only reliable one, and we cannot too strongly urge upon our readers the importance and the necessity of taking figures into account. Whatever influences may be temporarily in operation, nothing can prove so lastingly powerful as the question of supply that ultimately rule the market as everything else falls, and it is, therefore, essential that it should receive the first and fullest consideration. There are some persons who wholly disregard statistics, and merely take a superficial view of the market; but this is an exceedingly dangerous practice, and one which ought to be condemned, as it generally leads to severe losses. If any improvement is to be established in the price of copper, or for the matter of that, in any other metal, it ought to be based solely and entirely upon its own merits, and not upon a mere transitory feeling, or an expectation or a possibility. A sound and substantial reason is absolutely necessary to inspire confidence, otherwise consumers naturally shrink from buying in a market where over supply is the chief characteristic feature. Chili bars being the medium of speculation, it is of the greatest importance to make known their present position, which is as follows:—

STOCKS LANDED.			
	1877.	1878.	1879.
Dec. 1.	1877.	1878.	1879.
Liverpool.	11,945	18,132	25,479
Swansea.	1,842	1,745	3,979
Havre.	8,047	8,583	4,323
Advised by mail.	21,834	28,460	37,781
	3,614	6,024	9,747
	25,448	34,484	43,528
Price.	£83 10s.	£58 10s.	£66 10s.
Excess landed over 1879.	11,947	—	5,321
Excess afloat.	6,133	—	3,723
Total excess.	18,080	—	9,044

IRON.—This market remains steady, and the increased prices are well maintained. The numerous contracts which makers have on hand still render it difficult to place orders at anything below current rates, and it is thought by some that the general demand is slightly stimulated by the probability of higher prices shortly being quoted. Home consumers are said to be buying freely at the advanced rates, but shipments to the East and Australia keep very limited, and without much prospect at present of increasing to any great extent, nevertheless clearances to America continue to show that large quantities are still being exported to that country. The trade in the Welsh districts is reported to go on steadily improving with regard to the demand, but prices show no material change. More orders are being received, and fresh furnaces have been set in blast. Clearances are made in fairly large quantities, and there is about the average enquiry for American account. Bars are in a little better request, and pigs continue to be sold at a price which gives a fair margin for profit to the seller. At several of the establishments preparations are being made to increase the output, and many of the mills which have recently re-started are said to be in a most satisfactory and cheering condition. There is considerable activity displayed at most of the works at Birmingham, but it is reported that notwithstanding the improved position of the trade there are about 500 men who are unable to find employment, but this is attributed to there being so many labourers in the district, as most of the mills are going full time. The blast-furnace men have this week received an advance of 10 per cent. in their wages. A fair demand exists from most of the chief markets excepting Australia, from which country orders remain very scarce. Increased orders are being received by the Sheffield manufacturers, the demand for plates, hoops, and sheets keeping very good, and greater activity prevails amongst the rail-mills, and numerous enquiries are constantly being received for other descriptions of railway material. Owing to the improved demand for hematite brands they are rapidly becoming dearer in value. Foundries are better off for orders, and prices are steadily maintained. Makers at Leeds are all reported to be busy in the execution of their orders, especially manufacturers of plates, railway material, and general merchant iron. The cut nail trade, however, is rather quieter, which has arisen from the frost checking to a considerable extent the outdoor labour. The Middlesbrough market is reported steady, and the tendency of prices is upwards, and makers appear very confident of the future, and prices are rising for forward delivery. Connal's stores show a still further increase, and now amounts to 95,800 tons. Prices for pigs have varied slightly, owing to the fluctuations in the Glasgow market. Quotations for No. 3 are about 44s. to 44s. 6d., 47s. 6d. being asked for forward delivery. Shipments have slightly increased, and deliveries to Scotland have also improved. Future shipments of pigs to America are expected to be rather less, owing to the large quantities that have already been sent there. The manufactured trade keeps fairly active, contracts for plates, bars, and angles being given freely. Shipments are quoted at 8½ to 8½ 5s., bars at 7½, and angles at 7½ to 7½ 2s. 6d. The Glasgow warrant market has slightly fallen away, the opening price on Monday being 59s. 10½d., and advanced to 60s. 6d., but receded again to 59s. 8d., and on Wednesday 59s. was quoted, and closes to-day at 59s. 8d. **SHIPMENTS.**

For the week ending Dec. 7, 1879.	Tons	8,320
For the week ending Dec. 6, 1879.	Tons	8,113
Decrease.		207
Total increase for 1879.		154,378
Imports of Middlesbrough pig-iron into Grangemouth:—		
For the week ending Dec. 4, 1879.	Tons	7,295
For the week ending Dec. 7, 1878.	Tons	6,420
Increase.		875
Total decrease for 1879.		31,829
FURNACES.		
In blast Dec. 6, 1879.		99
In blast Dec. 7, 1878.		92

TIN.—At the commencement of the week this market kept fairly steady, and numerous and extensive transactions in foreign were reported at 91½ to 92½. Yesterday, however, owing to a pressure of sales the market became weaker, and quotations fluctuated considerably, 89½ to 90½ 10s. being officially quoted according to prompt. To-day the market has kept steady at 90½ 10s. spot, and 90½ 10s. to 91½ 10s. forward. One good feature in the position of this metal is the excellent control which is held over stock and supplies, and as the demand continues good, the advanced rates, with the exception perhaps of an occasional slight fall through the realisations of old stocks will doubtless be permanently maintained, and not unlikely are long they may be still further advanced. Prices are now 40½ to 50½ per ton below what they have been quoted in former times, and it is not improbable but that some further improvement may shortly be established throughout the trade.

LEAD.—This market is very firm, and prices are advancing. Consumers here continue to purchase in large quantities, but the rise appears to be too rapid for shippers, from whom the demand keeps very limited.

SPELTER.—Enquiries for large parcels are constantly being received, and prices are firm at the advanced price of 20½ 2s. 6d. to 20½ 5s. for Silesian. Since the rise commenced the demand from the East has been extremely limited both for Silesian and English.

STEEL.—The market for this metal is steady, the advanced prices being well maintained.

TIN-PLATES.—The demand has slightly improved, but prices are without change.

QUICKSILVER.—The price has been reduced to 7½, at which a good business passed.

The **MINING SHARE MARKET** has been rather quiet this week, and there are several influences at work to lessen buying orders, and consequently to weaken prices. First, there is the approach of the Christmas holidays, and the desire that most people have to keep a good balance at their bankers on New Year's Day; second, the tin smelters have again taken advantage of the fall in the speculative metal markets of London to put down the price of ore in Cornwall; and last, though not least, the weather is entirely suspending dressing operations at many of the lead and tin mines, and this means continuance of cost-sheets without returns to meet them. It is to be hoped, therefore, the weather will soon break up, and set water-wheels and crushers free.

The mines dealt in have been Devon Great Consols, Wheal Crebor, Herodsfoot, Parys Corporation, South Darren, Tankerville, Great Laxey, Leadhills, East Caradon, Marke Valley, East Crebor, Wheal Bassett, Van, East Van, and a few others.

TIN.—The smelters reduced the standards for ore in Cornwall on Saturday last 2½ per ton, and tin mines have been weaker and less dealt in. Carn Brea are quoted at 53 to 56; Dolcoath, 52 to 54; Cook's Kitchen, 3 to 3½; East Pool, 20 to 22; South Condurrow, 12 to 13; South Frances, 10 to 10½; Tincroft, 15½ to 16½; West Bassett, 11 to 11½; West Frances, 11 to 12; Wheal Agar, 6½ to 6¾; Wheal Bassett, 2½ to 2¾; Wheal Grenville, 4½ to 5½; Wheal Kitty, 2½ to 3; Wheal Pevor, 19½ to 20½; West Pevor, 5½ to 6; West Penstruthal, 15s. to 20s.; South Penstruthal, 15s. to 20s.; Botallack, 80 to 90; East Lovell, 1½ to 2; Penhalls, 1½ to 2.

COPPER mines have also been less active, and prices rather lower. Devon Great Consols are weaker, at 6½ to 7. Wheal Crebors weaker, at 7½ to 7¾. The latest report values the 120 east at 100½ per fm.; west, 90½; lode in 108 east, on new lode, 35½ per fathom; stoep in back of 108, 40½ per fathom. Parys Corporation, 18s. to 20s. The agent writes that the appearances in the 90 cross-cut south improve daily; the forebreast is producing rich stones of copper ore, and he hopes soon to have something good to report. Morfa Du, 16s. to 17s.; New Cook's Kitchen, 5½ to 6; East Caradon, 3 to 3½; Hington Down, 7s. 6d. to 12s. 6d.; Mellanear, 4½ to 4¾; Marke Valley, 32s. 6d. to 35s.; East Crebor, 1½ to 1¾; Prince of Wales, 10s. to 15s.; South Caradon, 7s. to 8s.; South Crofty, 4 to 4½; West Seton, 42½ to 47½; West Tolgus, 24 to 26.

LEAD continues firm, and lead mines fairly in demand. Van, 23 to 25; the monthly report will be found in another column. The sale of ore on Thursday (300 tons of lead, and 150 tons of blende) realised 4698½ 15s. Great Laxey, 17½ to 18½; D'Eresby Mountain, 30 to 40; Aberllyn, 10 to 11. South Darren, 3 to 3½; the lode in the 110 east and west has improved, and is strongly intermixed with lead for the full width of the lode (5 feet), with every appearance of further improvement. Pandora, 15s. to 20s.; the 33 south on God-dard's lode has improved very much in appearance. Pateley Bridge, 16s. to 17s.; no change reported here. Roman Gravel, 12½ to 13; the sampling for sale on Thursday next, is 100 tons of lead ore. Tankerville, 5½ to 6½; Glenroy, 15s. to 20s.; Gorsedd and Merilyn,

1½ to 2½; Herodsfoot, 2½ to 3½; Ladywell, ½ to 1; East Chiverton, 2½ to 2¾; West Assheton, 3½ to 3¾; West Chiverton, 2½ to 3.

West Wye Valley, 15s. to 25s.; Wye Valley, 15s. to 20s.; West Holway, 1 to 1½; Caron, 1½ to 2½; Crosswood, 1 to 1½; Frongoch, 3½ to 4; Grogwinion, 3½ to 3¾; Red Rock, 1½ to 2; Clementina, 1½ to 1¾. North D'Eresby, 1 to 1½; the lode being driven upon in No. 2 adit level is improving, and is here reported worth 25 cwt. of lead ore per fathom. Gwernymynydd, 5 to 5½. Leadhills, 4½ to 4¾; in the 20 south the lode has improved to 9 tons per fathom; stoep in back, 6 tons; 70 south, 2 tons.

FOREIGN MINES.—Arendal, 4 to 4½; Blue Tent, 1½ to 2½; Cape Copper, 33 to 35; Chontales, 5s. to 10s.; Colorado, 1½ to 1¾; Don Pedro del Rey are weaker at 14s. to 16s.; Eberhardt and Aurora, 3 to 3½; Flagstaff, 1½ to 1¾; Frontino and Bolivia, 2½ to 2¾; Javali, 7s. to 9s.; Missouri, 10 to 11; Rossa Grande, 3s. to 6s.; Ruby, 4½ to 5½; New Quebrada, 3 to 3½; Panulillo, 4½ to 4¾; Pestarena, 4s. to 6s.; Richmond, 9½ to 9¾; St. John del Rey, 270 to 280; Santa Barbara, 2 to 2½; Placerville, 2½ to 2¾; Canada Gold, 1½ to 1¾.

The Market for Mine Shares on the Stock Exchange has been much less animated during the week, and prices have in most cases slightly given way. This may be to some extent accounted for by the approach of the holidays, but is also influenced by the diminished activity in the tin and copper markets. There has, nevertheless, been a large number of transactions, and there is certainly not that difficulty of selling, though somewhat lower rates may have to be accepted, which was experienced a few months since. A matter of some interest in connection with the management of public companies occurred at the Chontales meeting on Monday, and really raises the question whether directors ought to be permitted to hold or use proxies at all. It appears that a number of comparatively small shareholders, representing about 6000 shares, are not satisfied with the existing management, and think that the present almost bankrupt condition of the concern might have been avoided. This is of course a question upon which each individual shareholder will have his own view; but there will probably be no difference of opinion as to the lamentable position of the enterprise, and the necessity for sound and judicious management. The holders of these 6000 shares have placed their confidence in Mr. W. B. Palmer, of Bristol, and it seems that he, with a view to serve his constituents, had arranged with or induced Mr. Henry Wethered (of Wethered, Cossam, and Wethered, the well-known Bristol coalowners) to join the direction; yet, at the meeting, the directors it seems, refused to admit Mr. Wethered to a seat at the board, and used their proxies, representing 20,000 shares, to keep him out. This would have been bad enough, but might have been attributed to mere error of judgment had it not been distinctly stated that the board had no particular objection to Mr. Wethered personally, but that they would not accept a nominee of Mr. Palmer, which is equivalent to saying that they cared more to gratify their own personal animosities than to consider the interest of the company. To compare the business capacities of Earl Nelson and Mr. Wethered might cause an ill-feeling towards the hereditary peerage, which is undesirable; but even Earl Nelson may be told that if "an Englishman loves a lord" it is because it has usually been found that the higher the social position which a man occupies the less willing is he to let his personal feelings override his duty to his fellows. As Chairman of the meeting, and, therefore, as having control of the proxies for the 20,000 shares, it would reasonably have been expected that so far from permitting personal considerations to prevail he would have advocated the obtaining of the co-operation of any business men who could even give the board an idea how to get out of their present dilemma, and thus save the interests especially of the small shareholders, who are the least able to bear the loss.

The Provincial Stock and Share Markets have not been adversely affected by the dulness in London, as might have been anticipated. Manchester forms no exception, for as will be seen from the report of our correspondents, Messrs. Baines, in another column, the tone of that market has been very steady, the recent general advance having, with few exceptions, been fully maintained all round, and where changes of importance have been marked the movement has been still upward, though this has not been quite so rapid as was the case a few weeks ago. With regard to Newcastle-on-Tyne, Messrs. Spence and Irwin report that that market has been more animated than last week, owing to a better demand for iron shares, and for some of our mines. The strongest advance is in Consol Iron shares, which are now 50 per cent. higher than they were three months ago. The Cornish markets have, as will be seen from the reports of Messrs. Carter, Reynolds, and Bawden, been weaker.

The improvement at Leadhills is mentioned as one of the features of the week, and dealings in the shares to a considerable extent have taken place at 4½ to 5. The discovery in the 20 end, or 70 fms. from surface, is now reported as worth about 9 to 10 tons of lead ore per fathom. In the stoep in back about 6 tons, and in the 70 end south 2 tons per fathom.

Devon Great Consols, at 6½ to 7, have been in demand all the week. The sale of ore next week (868 tons) is expected to realise better prices. Good progress is being made with the erection of rock-boring machinery.

Nouveau Monde, ½ to 1½; business has been done to-day at 20s.; the company have given the final notice that in conformity with Article 9 of the Deed of Settlement holders of shares must have them viséed within three months, either at the Paris or at the London office, otherwise all rights with respect to the shares will be lost.

St. John del Rey, 270 to 280; the latest telegram from the mines at Morro Velho, dated Rio de Janeiro, Dec. 11, states that the produce for November was 30,000 oits., of the value of 11,625½, the ley of the ore being 6.3 oits. per ton. At Cuiabá 200 tons were stamped in 15 days, and yielded 2.6 oits. per ton. Don Pedro North del Rey, ¾ to ¾. Capt. Vivian's report (Nov. 4) states that the wheel is doing excellent work, and forking the water rapidly. At Bryant's the level was (Nov. 11) being extended eastward as fast as possible, from where they hope to communicate a rise with the stoeps in the new lode in a short time, and which will enable them to discharge the ore from the said stoeps with greater facility; no improvement, however, has taken place here calling for remark. At the high viaduct across valley repairs are well advanced, and a very good job is being done. It will be made strong enough to resist the most heavy gales they may be visited with. At the 30 ft. wheel progress has been rather slow for want of force, but will be more rapid when the repairs to the viaduct referred to above are completed.

The Emma Mining Company directors' report, to be submitted to the general meeting on Wednesday, states that the litigation in the English Court may now be considered as concluded, and it is with some satisfaction that they are able to add that they have succeeded in establishing in every case the claims they set up against the several persons in this country who were connected with the formation of the company—against the promoters, trustees, original directors, solicitors, brokers, metal brokers, and accountants. In the case of some of these claims a settlement was arrived at out of Court, in other cases by judgments in Court in favour of the company. The amounts realised by settlements out of Court amount to 23,821½, while those realised by judgment amount to 32,840. The company has established its claims against various parties for 148,697½, but the amount is not yet realised. During 1878 alone the legal expenses incurred were 5081½ 3s. 4d. The directors state that they are in a position to pay off the preference debentures, and will shortly be in a position to pay off a portion of the original debentures; but in view of the present state of the American litigation they do not think it for the interests of the company to make for the present any distribution of the funds at their disposal. The directors desire to place their resignations in the hands of the shareholders, but will continue to act if so desired. They must, however, again remind the shareholders that, beyond charging the company for their travelling expenses, they have been performing these duties without taking their directors' fees, which, however, they are willing to leave for future consideration.

The latest advices from the Comstock Mines state that the north header of the Suto Tunnel was in 857 ft. from the line of the tunnel, and within 50 ft. of the Gould and Curry line, and 700 ft. east from the east cross-cut joint with Best and Belcher, on the level of the lateral tunnel drift. Some fine quartz strings and seams of crystallisation of lime have been met with in the face, and the drift is opening upon some good-looking vein matter. The south lateral drift is 100 ft. south of the Julia connection. The prospecting drift along the Star lode and the St. John ledge are progressing well, and some good low-grade quartz has been intersected. Work at all points is making good progress. The north lateral was driven 310 ft. last month.

Richmond, 9½ to 10; the usual telegram from the mines at Eureka, Nevada, states that the week's run was \$30,000, from 520 tons of ore. During the week the refinery produced doré bars to the value of \$30,000. No. 1 furnace is out of order, and temporarily stopped. No. 2 has been started instead. The manager (Nov. 12) reports upon the various points of operation. The chambers are looking very encouraging. No. 11 is opening out very well; they have opened on the width of the ore 30 ft., and the indications are that they will have a good ore body. In No. 12 they have a winze down 11 ft. in good ore. No. 13 is without much change, and looking well. No. 14 is improved, and the ore appears to widen as they rise on it; at present it shows a width of 40 ft. The furnaces are in good working order, and doing good work. The machinery, both in mine and smelting works, is running smoothly. A later report (Nov. 19) states that they are now making preparations to resume work in the 1000 ft. level. The chambers, on the whole, are looking better than they were last week. The furnaces are in good working order, and smelting average quantities of ore.

Ruby and Dunderberg, 4½ to 4¾; the manager (Nov. 15) reports that contracts have been let for running drifts 100 ft. each on the 400 ft. and 500 ft. levels—these expected to be completed in three weeks. During the week they have commenced a new drift from the

winze about 40 ft. below the 400 ft. level for the purpose of getting into the old ore chamber, and it has been advanced 10 ft. The 400 ft. south drift (contract) has been advanced 10 ft. in two days. The intermediate drift between the 400 ft. and 500 ft. levels is in a change of ground, which is looking favourable for ore; some stones of very good ore have been found.

Missouri Lead, 10 to 11; last advices state that miners have been put to work drifting on the lode running from master shaft to St. Clair Mine. Contracts are being given out for the cutting of 1000 cords of wood for fuel, at 60 cents per cord, and the timber is also being out for repairing the St. Clair shaft.

Sentein, 2½ to 2½; the company has just sold 50 tons of first class lead ore at the equivalent of 13½. 5s. 9d. per ton to the Société Anonyme des Mines et Fonderies de Pontgibaud, and 25 tons of the same quality at the same price to Messrs. Nevill, Druce, and Co. It appears that altogether very satisfactory progress is being made. The manager (Dec. 6) reports that in consequence of bad weather and heavy snow, and there being a miners' fete at Sentein, very little work has been done at the mine this week, only 50 tons of the usual quality ore having been broken. No carts have been able to go up to the mine for ore, the road being impassable through the snow drifts. It is, however, possible that the weather may clear up sufficiently to send the carts to the mine again this season.

In Hydraulic or Gold-Washing Companies' shares there has been comparatively little doing. The great mining debris case, upon the result of which really hangs the question whether hydraulic mining be extinguished or continued, was resumed before the Supreme Court of California on Nov. 14. Judge Van Clief urged that the contention that the miners (defendants), like the farmers (plaintiffs) have riparian rights on the Bear river, and that plaintiffs had not proven an unreasonable use thereof, was a *non sequitur*. It is immaterial how the defendants threw the tailings into the river, the issue is—did the defendants put the tailings into the river, and thence on to the plaintiff's land, to his injury? There is no question of the water or the use of it. He thought that the defendants must abandon all their pleas except one—"That mining must be regarded as a favoured pursuit protected by law and the Federal Government, entitled to rights over all others, and given the right to whelm the valleys and bury this or other cities 20 ft. deep beneath the stone, sand, and other matters they so prodigally wash away to get the metal they seek for." There can be no question that this precisely explains what the miners in effect claim to be their rights; and it is for this reason that it has always been urged in the *Mining Journal* that they are practically asking the American Courts to do that which the jurists of every civilised nation under the sun would regard as unreasonable and prejudicial to the interests of the community generally. That the mining industry is of paramount importance in every country is now acknowledged; but it is also well understood mining can always, with proper judgment and skill, be carried on without injuring the property of others. The Chief Justice announced that on the following Monday he would state whether he desired to hear further arguments, and his decision is looked forward to with much interest.

In Lead Mine Shares there has been a considerable amount of business doing, and prices have been well maintained, which is, indeed, almost surprising, seeing that the frost has seriously impeded dressing operations everywhere, and in some cases caused their total suspension. In less prosperous times a few days frost has had a very depressing effect upon shares, although, of course, the weather could not possibly have had a permanently adverse effect on the mines, so that the present stability is very generally regarded as an evidence that the upward movement of the price of lead, both in this country and in America, is likely to continue, as indeed, the figures published clearly enough indicate. Van, 23 to 25; the mine looking much better. The usual monthly report appears in another column. The sale on Monday (300 tons of lead ore and 150 tons of blende) realised 4687. 15s.

Tankerville, 6 to 6½; a large business has been reported in these shares during the week. The bottom of the mine has further improved, and a wide lode or lodes about 12 ft. wide is now operated on. Some light will no doubt be thrown on this important discovery, especially as to the junction of lodes in bottom levels in the course of a few weeks.

Mineral Corporation, 12 to 13; the frost has of course impeded operations here as elsewhere, but latest advices from the district are to the effect that it appears to be breaking, so that an early resumption of surface operations is anticipated. Capt. Bennetts (Dec. 10) reports that in stripping down the lode in the No. 3 adit he is glad to say that it is turning out more lead and blende ore than he expected. It is worth fully 1½ ton to the fathom. At surface the frost has stopped the dressing operations, but from a change in the weather they now have hopes they may be able to resume dressing on Friday. At Great D'Eresby deep adit the frost has somewhat impeded progress as their water-courses have been frozen, which has at times cut off at times the supply of water for the engine. During the week the adit has been advanced 1½ fms., which is considered very good work.

British Silver-Lead, 2½ to 3; in consequence of the severe frost they have discontinued dressing. The 10 yard level west continues worth 30l. per fathom, and they have a nice pile of ore on the surface. Plasdu and Park, 4 to 5; the sinking at No. 4 shaft, on the Mace-y-Pwell lode, is reported to be now in a nip, but they expect to get it with ore soon, as it is beginning to open out again. Westminster, 8 to 8½; the several plates said to be still looking well, but dressing is suspended in consequence of the frost.

Grogwin, 3½ to 3½; there is nothing particularly new this week, the mine is reported to be looking well, and yielding plenty of lead, but dressing operations have been somewhat hindered by the stoppage of the water-wheel owing to the frost. The latest advices, however, report a thaw, and consequent resumption of activity. Frogoch, 3½ to 4; thanks to the auxiliary steam-power the frosty weather has not caused much hindrance here, and works are going on satisfactorily. The indications of rich deposits of mineral are kept in position, and form an exceedingly valuable reserve power, available for use in dry or frosty weather, at which times water-wheels are often apt to become useless. The progress making at the mine is described as exceedingly satisfactory, and it is stated that returns of ore on a large scale will be made during the coming year. The average monthly returns of lead from this mine for the past 35 years has been upwards of 100 tons; for the present month the sales are to be 100 tons of lead and 200 tons of blende. Caron, 1½ to 2½; the prospects here are described as encouraging, and the indications of rich deposits of mineral are stated to be increasing. Red Rock, 1½ to 2; the meeting was held on Tuesday, and is reported in another column. The loss for the past year is about 1000l. Wye Valley, ½ to ¾; West Wye Valley, ½ to 1.

The subjoined is the list of the closing quotations:—Asheton, 1 to 1½; Devon Great Consols, 6½ to 7; East Caradon, 3 to 3½; East Van, 2½ to 2½; Gwernymynydd, 5½ to 5½; Glenroy, ¾ to 1; Great Laxey, 18 to 19; Leadhills, 4½ to 4½; Marke Valley, 1½ to 1½; Pateley Bridge, ¾ to ¾; Roman Gravel, 12½ to 12½; Tankerville, 5½ to 6½; Tincroft, 15½ to 16½; Van, 23 to 24; West Asheton, 3 to 3½; West Chiverton, 2½ to 3; Wheel Crebor, 7½ to 7½; Wheel Grenville, 4½ to 5½; Almada and Tinto, ¾ to ¾; Birdseye, ¾ to ¾; Brierley, 2 to 2½; Cad, 1½ to 1½; Cad Copper, 33 to 35; Chontales, ¾ to ¾; Colson United, 1½ to 1½; Don Pedro, ¾ to ¾; Exchequer, ¾ to ¾; Flagstaff, 1½ to 1½; Frontino and Bolivia, 2½ to 2½; Huitafala, 1½ to 1½; Javali, ¾ to ¾; Kapanga, ¾ to ¾; New Quebrada, 3½ to 3½; Nouveau Monde, ¾ to ¾; Pestarena, ¾ to ¾; Placerville, 2½ to 2½; Port Phillip, ¾ to ¾; Richmond Consolidated, 9½ to 9½; St. John del Rey, 270 to 280; Sierra Buttes, 1½ to 1½; Santa Barbara, 2 to 2½; United Mexican, 2½ to 3; Yorke Peninsula, ¾ to ¾; Yorke Pref., ¾ to ¾.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

GAS SHARES.—The principal business in these shares, according to this evening's report of Mr. W. L. Webb, of the Stock Exchange and Fench-lane, has been in the 10s. 6d. shares of the Commercial Union, 181, 180; Continental Union, 20½, 19½; ditto, ditto, new, 1889 and 1872, 13; European new, 7½ paid, 13½; ditto, ditto, 5 per cent. paid, 8½; Gas, A. 181, 180½, 180; ditto, fourth issue, 17½; Imperial Continental, from 180½ to 181 ex div.; Monte Video, 14½, 15; Oriental, 7 11/16; Phoenix, 37, 36½; Rio de Janeiro, 27; South Metropolitan, 200½, 200. († exceptional amount at special price.) Gas stocks are dull. Imperial Continental had a further drop of 4 per cent., and Commercial 2 per cent. For closing prices see list on last page of Journal.

INSURANCE SHARES have, according to this evening's report of Mr. W. L. Webb, of the Stock Exchange and Fench-lane, been dealt in as follows († exceptional amount at special prices):—Alliance British and Foreign, 27½, 27½; Church of England, 4½; Commercial Union, 19½, 19½; Imperial Fire, 152½, 152; Railway Passengers, 7½; Rock Life, 8½, 8½; Royal Exchange, 408, 408; Universal Marine, 10½, 10½. Insurance shares are dull, especially Commercial Union. For closing prices see list on last page of Journal.

GENERAL MARKETS.—As is usually the case towards the close of the year, business this week has been somewhat limited. Home railways have had a general reaction, the decline in some instances being considerable, particularly in North British and Caledonian, which have fallen in consequence of the breaking off for the present of the negotiations for a joint working agreement. The traffic returns, except in a few cases, were decidedly unsatisfactory. Among foreign railways, Mexican railway shares, which I recommended a short time since, have had an important advance. American railways have been steadier this week, and not so much doing in them. Grand Trunk and Great Western of Canada are firm, hopes being still entertained of a fusion between the two companies. Telegraph shares are fairly good. Western and Brazilian in particular. Foreign stocks have been particularly active, especially Egyptian Bonds; but Turkish securities are flat, and lower in price. The Board of Trade Returns, published this week, were very favourable, and show that the trade of the country generally continues to improve. Mines are rather less active.—W. H. H. WATSON: 1 St. Michael's Alley, Cornhill, Friday, Dec. 12.

Messrs. PIRLEY and ABELL.—Gold: The demand for gold for America has subsided, and only 346,000l. has been withdrawn from the Bank—50,000l. for the Brazil, and 296,000l. for Egypt. The arrivals have been 24,550l. from India, and 6650l. from the Brazil. The P. and O. steamer takes to day 296,700l. to Alexandria. The vessel which left Havre on the 4th inst. took 40,000l. to New York.—Silver: Silver has been in fair demand, and the price remained steady at our last week's quotation of 53½d. until Tuesday, the 9th, when a report that the German Government contemplated a renewal of their sales caused a decline in value, and for a time 52½d. could scarcely have been obtained. This rumour has to-day been contradicted; the market has recovered its tone, and but for an entire absence of supplies, would be firmer. The arrivals have been 41,020l. from the Brazil, and 3315l. from New York. The Poonah takes 91,000l. to Bombay and 30,100l. to Calcutta, and the Lusitania 52,000l. to Australia, in English currency. The steamer which left Venice on the 8th inst. took 40,000l. Austrian florins, to India.

With this week's Journal a SUPPLEMENTARY SHEET is given, which contains—Original Correspondence; On Boiler Accidents and their Prevention—No. III.; Cheaper Coal for the Metropolis; Meeting of Northern Coalowners in London—National Coal Supply Association—Cheaper Coal for the Metropolis (W. J. Thompson); Immense Increase of Revenue to Russia—Hyper-rehabilitation of National Resources (W. J. Thompson); Cape Copper Mining Company; Lake Superior Mines as a Field for the Profitable Employment of British Capital; Chontales Mining Company (W. B. Palmer); Copiapo Mining Company (R. S. Archbold); Flagstaff Mining Company of Utah; Richmond Consolidated Mining Company (G. Hopkins); Mining in Northern Mexico—No. III.; Ornamenting Metals and Alloys; the Panulillo Copper Company; Rock Drills (Hathorn and Co., H. Waddington); Rock-Drilling Machinery (J. D. Thomas); Silver Mining in Cornwall (G. Henwood); Lady Ashburton Mining Company; Home Industry—National Wealth—Silver Mining in Cornwall (T. Vosper); Cornish Mine Dialects Again; the Great Discovery of Tin in Roche; Practical Mining—Shafts; Mining and Swindling; South Frances (O. W. Seccombe, T. Tremar); the Great Lodes of the D'Eresby Mountain (O. Kneebone); Indirect Meddling—Official Interference (J. Lean); Rock's Mine, Roche (R. Symons); Mines in Breage (R. Symons); Biographical Sketches of Mining Men (R. Symons); Welsh United Mines; Copper in Cardiganshire and Montgomeryshire. Meetings of Public Companies: General Mining Association, Chontales Consolidated, Ladywell, and Red Rock Mining Companies, &c.

LEADHILLS.—Telegram, Dec. 12: The following telegram has just been received from Capt. A. Waters from Leadhills:—"The 20 ft. level south is worth quite 9 tons; stope in back worth 6 tons. The 70 ft. level south is improved to 2 tons per fathom."

NANT RHYS SYNDICATE (Limited).—The list of applications for shares in this undertaking, as will be seen on reference to our advertising column, closes shortly. We hear that a large number have been applied for, and that the works will be commenced next month. This undertaking is highly spoken of, and taking into consideration the greatly advanced price of lead the shares will, it is fully expected, prove very remunerative.

NORTH D'ERESBY MOUNTAIN.—Capt. Nottingham, of Pandora and other mines, has just made a thorough inspection of this promising property on behalf of a gentleman who is largely interested in another mine in the same district. This report fully corroborates the opinions expressed by other well-known authorities, and on the faith of it the gentleman above referred to has purchased a considerable number of shares. To-day (Friday) an improvement is announced by the manager, the lode in No. 2 adit level being worth 25 cwt. of lead per fathom. This will pay well.

SOUTH D'ERESBY.—A considerable improvement has taken place in the shaft in No. 2 adit. Last week the lode was worth 15 cwt. per fathom; its value has now increased to 1 ton, with every indication of further improvement. A sample of lead from this part of the mine has been sent to the London offices, where it can be inspected. South de Eresby is proving the highly mineralised character of the district, and shows clearly that the lodes improve in depth.

THE CREBOR MINES.—The forthcoming sale of copper at Crebor will leave a much larger profit than was estimated at the recent meeting; in fact, the result will astonish the shareholders. The value of the lode in the 108 east and the 120 east has further improved—one inspector valuing the latter as high as 100l. per fathom. This continuity of value of the eastern part of Crebor speaks volumes for East Crebor, and points to the probability of an immense deposit of copper at the junction of the two lodes. Everything is progressing rapidly here preliminary to the early forking of the mine, when a valuable property will be discovered. Sufficient is now known to ensure the permanent recognition of Crebor and East Crebor as market mines.

EAST LONGSTONE.—The district of Launceston, hitherto an entirely agricultural one, has been greatly surprised by the discoveries of silver-lead made at Greystone and East Longstone Mines. The whole populace, whilst rejoicing at the recent discoveries, are looking forward with intense anxiety to the cutting of the great east and west lode in East Longstone Mine, which will be about 40 fathoms from surface. Many strong branches of gossan have been cut through containing in the rough 8½ ozs. of silver per ton of stuff, and these branches, dipping as they do towards the main lode, which has a beautiful character at surface, give the shareholders great hopes of a rich lode.

LLYN-LLYNGAN RHEIDOL.—The Corporation of Aberystwith have at last overcome all difficulties of securing this magnificent water-supply for the town. This when completed will be one of the most efficient both for purity of water and pressure-water systems in the United Kingdom, and the promoter, Dr. Harries, deserves the thanks of the community he lives amongst for having overcome a most unreasonable and bigotted local opposition, besides the inevitable red tapeism of Government officials.

PONTGIBAUD SILVER-LEAD MINING AND SMELTING COMPANY.—The ordinary annual general meeting was held in Paris on Nov. 19, when the reports and accounts for the year ending June 30 were received and approved. The gross profits amounted to 14,953l. 10s. 10d. The various sums written off plant, and the royalties, &c., absorbed 4471l. 18s. 8d., leaving the sum of 10,481l. 12s. 2d., as the net profit of the year. The dividend for the year was fixed at 25 frs., of which 10 frs. was paid on account in June, and the balance of 15 frs. (or 10s. 9d.) per share is now in course of payment at the London agency. The report of Messrs. John and Richard Taylor, the engineers in chief of the company, stated that the results of the smelting operations had been remarkably good, but showed that there had been some diminution in the reserves in the mines. The value of the returns had been most seriously affected by the low prices obtained for lead and silver. The recent rapid improvement in these metals will generally have a very beneficial influence on the company.

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

MESSRS J. TAYLOR AND CO., MINING ENGINEERS AND INSPECTORS, 86, LONDON WALL, LONDON, E.C. Have Agents in England, Scotland, Wales, and on the Continent.

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As the vendors are not prepared to undertake the working of the mines themselves, they would DISPOSE OF THEM on very moderate terms.

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WANTED, a SECOND-HAND 8 to 10 ton STEAM CAPSTAN for MINING PURPOSES.

Particulars and price to Messrs WADHAM, TURNER, and Co., Barrow-in-Furness.

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WANTED, a SECOND-HAND STONE BREAKER. Jaw, 15 feet by 9 feet. Address, "A. B.," Lion Hotel, Aberystwith.

WANTED, a MANAGER for the BILBAO IRON ORE COMPANY'S PROPERTY at PORTUGALETE (BILBAO), SPAIN, having a general knowledge of business, and capable of efficiently conducting the working of the MINES, RAILWAY, and SHIPPING. A gentleman with experience of foreign countries and acquainted with Spanish would be preferred. Applications to be addressed, not later than the 1st January, to the Secretary, St. Stephen's Palace Chambers, Westminster, S.W.

WANTED, a COPY of MINERS' MANUAL OF ARITHMETIC AND SURVEYING, LEVELLING AND LAND SURVEYING: by W. RICHARDS. 1859: Longmans and Co. Apply, J. O. S. LEWIS, Stationer, 36 and 37, Cow Cross-street, Smithfield, E.C.

WANTED, a PRACTICAL SMELTER as UNDER MANAGER for LEAD SMELTING and DESILVERISING WORKS, in SPAIN. Application to be made to Mr. T. SOPWITH, 6, Great George-street, Westminster.

TO FURNACE MANAGERS.

WANTED, a PRACTICAL FURNACE MANAGER of GOOD EXPERIENCE TO TAKE CHARGE OF FURNACES about to be PUT into BLAST. Apply to Mr. THOMAS DAVIES, Accountant, 1, Lombard-court, London, E.C.

WANTED, TO BUY, TWO HUNDRED SHARES in the BWHCH UNITED MINES. As this is genuine, none but persons desiring TO SELL need apply. Address, "T. G. T.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

TO CAPITALISTS, PROMOTERS, INVESTORS, &c.

A MINING ENGINEER of large experience in the WEST OF ENGLAND is in a position to obtain VALUABLE MINERAL GRANTS for clients on easy terms, and to INTRODUCE PROGRESSIVE PROPERTIES requiring very little additional expenditure to enable considerable returns to be made. With improved trade large profits are certain. Address, "C.E., F.G.S.," MINING JOURNAL Office, 26, Fleet-street, London.

TO PARENTS AND GUARDIANS.

AN ELIGIBLE OPPORTUNITY is now offered for the SETTLEMENT of an ACTIVE YOUNG GENTLEMAN IN CANADA. He will be enabled to obtain a profession as a Solicitor in five, or if he be a Graduate in three years. Cost of living about £150. In the meantime he will have active work, and obtain a knowledge of the Dominion, which is destined to become one of the most prosperous of the Colonies. Premium, £100 sterling. HERBERT C. JONES, 32, Wellington-street, Toronto. Canada Land and Loan Agency.

TO SHAREHOLDERS OR INTENDING INVESTORS.

THE EAST LONGSTONE SILVER-LEAD MINE COMPANY (LIMITED). MESSRS. THOMPSON AND SON, 145, UNION STREET, PLYMOUTH, invite APPLICATIONS for the FEW REMAINING SHARES at 21s. each, fully paid, in this Mine before the lode be cut in the deep adit level. Many branches of silver gossan have been met with dipping towards the great lode, which indication (see report in Journal) is highly favourable for great profits. These shares must be secured at once to save a high premium which will follow on a rich lode. Full particulars may be had on application.

TO SHAREHOLDERS AND INTENDING INVESTORS.

THE FORTESCUE NATIVE TIN, COPPER, SILVER, AND This company is issuing 2000 shares, of 20s. each, fully paid up, for extension and calcining works, applications for which must be made at once to secure any portion. The lowest possible estimate from the working of this mine shows over 100 per cent. per annum to investors. Full particulars may be had of Messrs. THOMPSON and SON, 145, Union-street, Plymouth.

TO INVESTORS—SHARES PAYING OVER 100 PER CENT.

MESSRS. THOMPSON AND SON, 145, UNION STREET, PLYMOUTH, publish this day their Investment Circular—"HOW AND REAP"—showing how money may be made by investments. It contains valuable information. Post free to clients and correspondents. Others please enclose 1d. stamp.

FOR SALE, SECOND-HAND BLAKE'S STONE CRUSHER

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Address, "Box 45," Plymouth.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

Received,—"S. J."—"T. P." (Tocomo): A report of the meeting of shareholders appeared in last week's Journal—"Constant Reader" (Dowdals): We will endeavour to procure the particulars—"Old One": Write to Mr. A. Francis, of Gogginan, who will send the information you require—"W. M." (Canonbury): "F. G. S." (Manchester)—"Enquirer" (Lady Ashburton) should write to the Secretary, who will readily communicate any necessary information—"R. J. S."—"Shareholder" (Chapel House Colliery)—"An Investor" (Panulicillo).

IMPORTANT NOTICE.—FOREIGN POSTAGE ON THE "MINING JOURNAL."—Under the Universal Postal Convention the postage of the Mining Journal to many countries has been greatly reduced as compared with former rates. Henceforth the subscription will be 1*l*. 10*s*. 4*d*. per annum (3*l*. 9*s*. 4*d*.), postage included for the following countries. The amount will, if desired, be collected at the counter-remitted:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxembourg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta, Turkey, Morocco, Tunis, and the Canary Islands. Spain 1*l*. 1*l*. 9*s*. 4*d*. Subscribers remitting to the office can in most cases avail themselves of the International Postal Money Order system; those in the United States and Germany should advise their remittance by letter, as the Post Office does not give the sender's name.

THE MINING JOURNAL.

Railway and Commercial Gazette.

LONDON, DECEMBER 13, 1879

IRON AND COAL TRADE PROSPECTS.

At the present time the all-absorbing question in our chief mining and manufacturing districts is as to the probable future of the iron and coal trades, and as to whether the increasing demand for pig and rolled iron with their sudden rise in value is likely to continue; this is, of course, a matter of deep importance to tens of thousands, so the question raised should be met with something more tangible than the mere opinion of writers or interested persons. It is, therefore, necessary that those who take the subject in hand should give some data in itself accurate by which to guide the public in coming to a conclusion. To do this it is essential to go back a few years, when a similar revival of trade took place, and when the price of iron and coal went up to a point previously unknown. But before doing so it will be well to remark that the depression which has existed in our leading industries for some considerable time past—up to about the end of August at least—led to the putting out of a number of blast-furnaces, so that when there recently came, without any expectation on the part of our ironmasters, a sudden demand for large quantities of pig in the first instance, it was considered that the stocks in hand were likely to be exhausted before they could in part be replaced, to the extent of keeping consumers fully going, prices naturally went up because of the pertinacity of purchasers. This was exactly the case eight years ago, when the prices of iron and coal began advancing; and, singularly enough, the rise in the value of both began in the same month of 1871 and 1879. In September, 1871, the price of forge pigs in the North of England was 50*s*. per ton, and in the March following it was 84*s*., whilst in July it was 110*s*. But at that time, we are told by Mr. I. LOWTHIAN BELL, there was not a single house in Middlesborough that had not six months' orders in hand, at prices from 45*s*. to 47*s*. per ton; and at the present time we may say there are many houses that have contracts in hand at the rates ruling the market some four or five months ago. The great change which has lately taken place is from the same cause as in 1870 and 1871. The marked increase in our exports, particularly of railway iron, for we find that in 1868 the quantity sent out of the country was 583,488 tons, whilst in 1870 it was 1,059,392 tons, in 1871 it slightly declined, being 981,197 tons, and in 1872 it was 945,420 tons. The price, of course, went rapidly up, for the average charge for railway material, which in 1868 was 8*l*. per ton, in 1870 was 8*l*. 5*s*.; in 1872 it went up to 10*l*. 10*s*., whilst in 1873 the highest point known was reached, being 13*l*. 5*s*. per ton. Then there followed a rather rapid descent, so that in 1878 the value was only 7*l*. 9*s*. per ton—16*s*. less than it was 10 years previously, and in September, 1879, considerably less. But up nearly to the close of 1873 all persons connected with iron manufacture in any way appeared to be sanguine that the prosperity which had been so suddenly showered upon them would continue, so they took measures for increasing their production, whilst large capitalists, without much consideration, embarked in an industry which was making immense profits. But then came the reaction in 1874, when the business with America fell off in a marked degree, and in the following year the exports of railway iron were actually below what they were in 1868, whilst during the three succeeding years there was a still further decline. But things are very different now to what they were during the prosperous years we have alluded to. And here we may remark that the vast business done with America in railway iron in particular materially helped to make the iron trade so active and profitable as it was a few years ago, and now we have the same cause creating the present unlooked for but thankful change for the better, for whilst our total shipments of railway iron to the States last year were only 922 tons, several thousands of tons have been shipped during the last two or three months, whilst there are still large orders uncompleted. Still, latest reports are to the effect that the iron trade in America has become more settled, so that we may now expect to find our own markets less susceptible to sudden changes. Still the existing activity, so far as America is concerned, is not likely to be maintained, for we have only to look back to our past trade with that great country. Our exports of railway iron to America have been:—

1869.....Tons 395,500	1874.....Tons 94,446
1870.....421,824	1875.....17,790
1871.....512,277	1876.....374
1872.....467,304	1877.....2,524
1873.....186,300	1878.....922

If we come to pig, the foundation of all our trade in iron, and the price of which has gone up so rapidly during the last two or three months, we cannot see any ground for a scarcity of it, even should there be a much greater demand for it for the rolling mills or foundries. On the contrary, we believe that it is necessary something like a million more tons per annum could be produced without any difficulty whatever. The production could easily be made to come up to the consumption, or more. Prices, however, it must be admitted, have during the greater part of the year been unremunerative, and it is to be hoped that the existing rate will be maintained, but we certainly cannot see how it is likely to be enhanced when work commences in earnest in the new year. The only fear appears really to be that the existing state of things may lead to a larger production of pig than will be actually required, and so cause prices to come down. This will be apparent when we come to look at the quantity of pig produced for several years past, and which it will be seen has varied a great deal. The quantity was as follows:—

1867.....Tons 4,761,023	1873.....Tons 6,566,451
1868.....4,970,206	1874.....5,991,408
1869.....5,445,757	1875.....6,365,462
1870.....5,963,515	1876.....6,555,997
1871.....6,627,179	1877.....6,608,664
1872.....6,723,387	1878.....6,381,051

From the above figures it will be seen that last year there was a much less quantity produced than there was several years before, and if we take the output of the furnaces for the present year at 6,500,000 tons, we shall still be below 1871 and 1872. But it must not be overlooked that since those two last years great changes have taken place in connection with the production of both raw and manufactured iron, whilst there has not only been a marked development of the ironstone fields that were then worked, but some new ones have also been discovered. We have, therefore, more extensive supplies of

ironstone available in some of our most important districts, but in nearly all of them there are more furnaces erected, although many of them are now out of blast. There would, consequently, as we have before stated, be no difficulty in largely increasing our production of pig. This will be more forcibly shown when the figures for 1872 are compared with those of 1878. Now, if our ironmasters could produce 342,336 tons more pig in 1872 than in 1878, with a considerably less number of furnaces, we may fairly assume that their productive power must at the present time be equal to a good deal more than 7,000,000 tons a year. This, perhaps, will be more fully shown by comparing the furnaces in and out in 1872 and 1878-9 in all parts of the kingdom, as follows:—

	Out.	In.	Out.	In.
Northumberland.....	4	4	3	1
Durham.....	7	49	39	32
Yorkshire, North.....	7	74	23	67
" West.....	10	30	19	29
Derbyshire.....	8	38	17	38
Lancashire.....	5	35	20	30
Cumberland.....	9	34	26	27
Shropshire.....	7	22	17	11
Staffordshire, North.....	5	31	11	24
" South.....	38	107	92	55
Northamptonshire.....	1	9	5	15
Lincolnshire.....	2	7	10	11
Gloucestershire.....	4	6	2	7
Wiltshire.....	2	5	5	2
Somersetshire.....	0	1	1	0
North Wales.....	4	8	8	3
South Wales.....	39	115	86	57
Scotland.....	24	130	57	95
Total.....	176	705	443	504

It will be seen that in 1872 the 705 furnaces in blast produced 6,723,387 tons of pig, whilst there will be now at least 950 furnaces that could be made available were they required. From the facts we have thus given we do not think there is any fear whatever that pig-iron will be at all scarce or that it can reach an abnormally high price. The conclusions to be drawn from the figures we have given we consider points in a contrary direction, so we consider that if the existing rates are maintained it is as much, if not more, than can be expected.

Coal is in a different category altogether from iron either raw or manufactured. Unlike the furnaces the mines cannot be stopped, for there must always be some persons kept about them, whilst minimum rents have to be paid under any circumstances. The consequence is that the coal-producing power of the country keeps up well, but nothing like its full extent. Unfortunately, the great prosperity enjoyed by coalowners in all parts of the kingdom in 1871 and the two following years led a great many persons to speculate in colliery property, and to open out large coal fields, so that the output has always been beyond the requirements of consumers. This was more especially the case during the whole of last summer, when the workmen generally were on short time. To some slight extent the collieries have benefited of late by the putting in blast of some furnaces in different parts of the country, as well as by the severe weather. But these causes have not by a long way led to the consumption at all approaching the power of production, and until the two come more closely together prices cannot undergo any material change for the better. That they are particularly low, and that many colliery owners have lost largely during the present year, does not admit of a doubt; but this is simply the result of so many mines having been opened out, and so much coal thrown on to the various markets that buyers are more able to fix the prices than the sellers. Our present production is about 134,000,000 tons a year; but were there a demand and the pits worked to their full extent even without double shifts, but only eight or nine hours a day, the yield would not be much less than 170,000,000 tons. Were shifts to be worked as they were formerly, when there were comparatively few mines, then the output would, of course, be much greater. It will, therefore, take some years at the rate of progress which has been going on since 1872 before the probable consumption will overtake the power of production. If more furnaces are put in blast that will help forward the work of progress; but there must be a marked increase in the make of pig-iron before it will be of that material advantage to colliery owners as will cause prices of coal to be very much higher than they now are.

THE CLEVELAND FUTURE.

A speech of considerable importance was recently made by Mr. WHITWELL, a gentleman of extensive local experience, upon the future in store for the Cleveland iron trade. Upon the whole the tone of Mr. WHITWELL'S speech was hopeful. It commenced by reference to the inflation of 1871, 1872, and 1873, and the evils which had resulted therefrom; and the speaker then enforced the necessity of a return by all parties, as well masters as men, to sound and sensible principles of economy, industry, and intelligence. We have more than once, to the best of our poor ability, harped upon this same theme, and have argued that, just as economy, industry, and intelligence raised the fathers of the British iron trade to wealth and eminence, so their descendants must follow the same well-worn paths, unless they wish to be left behind in the great industrial race of the world. Well, given economy, industry, and intelligence, and given certain other conditions to which he proceeded to call attention, Mr. WHITWELL did not despair of the Cleveland future. Although Mr. WHITWELL considered, like most other calm and quiet observers, that the American demand which has prevailed of late for English and Scotch pig would not continue, and this for the best of all reasons—the vast powers of production now possessed by the Americans; still he expressed his confidence in the stability of Cleveland, if the district did but boldly face the reaction in favour of steel. Mr. WHITWELL believed many things. Thus, he believed that the consumption of plates and angle iron would be much increased if steel superseded iron, from the manner in which the milder qualities of steel could be worked under the hammer in the hands of a skillful workman. He believed that BOLCKOW, VAUGHAN, and Co. (Limited) were likely to manufacture Bessemer steel out of Cleveland ore for ship-plates, and he considered that it could be done successfully. He believed, but by way of fortifying his belief in the Cleveland future Mr. WHITWELL referred to the Cleveland past.

Thus he recalled the fact that in 1829 Middlesborough was in the novel position of having only one house. It surely was not a very difficult matter to be the "oldest inhabitant" of Middlesborough in 1829, since the head of its one house must almost of necessity have occupied that position. But badinage apart, Middlesborough was evidently a very insignificant place in 1829, and it suited Mr. WHITWELL'S purpose to recall the fact. It was not until 1840 that the first cargo of iron was shipped from Middlesborough; but then the town began to progress with a vengeance. In 1868 the Cleveland group had 83 blast furnaces in operation, and it was estimated that the production of pig in the group in that year was 1,230,000 tons, the average price realised being 43*s*. per ton. Cleveland continued to make progress as an industrial district during the next five years, and in 1873 it had 132 furnaces in blast, while the price of its pig had attained the remarkable level of 120*s*. per ton. This was Cleveland's most prosperous year; its wealth and activity had surpassed even the greedy dreams of avarice, albeit that the profits of ironmasters were, after all, reduced a good deal by the extravagant demands of their workpeople. But a reaction was at hand. In September, 1873, the United States were prostrated by the great JAY COOKE panic, and the effects of the crash were soon felt in Cleveland, as well as in all other parts of industrial Europe. The five succeeding years—1874, 1875, 1876, 1877, and 1878—all witnessed an ebb of the tide of Cleveland prosperity, until the price of Cleveland pig receded to the miserable level of 33*s*. per ton. But now, as Mr. WHITWELL showed, the tide has once more turned; and given economy, industry, and intelligence—all precious factors in commercial

success—Mr. WHITWELL believes that there are yet prosperous and happy times in store for Cleveland.

TRIAL OF EXPLOSIVES.—The experiments in the Sevecock Quarry, Chacowater, under the auspices of the Committee of the Polytechnic Society, the Miners' Association, and the Mining Institute were carried out on Dec. 2. The object of the experiments was to test the relative economy of the different explosives as used in hard ground, and the quarry chosen was of elvan of more than usual hardness and toughness. The holes bored were allotted to each competitor by ballot. Those charged with common powder were fired first. The total weight of powder used was registered, and the value of the powder used was the standard by which the amounts allowed to other competitors were determined, having reference to the net market prices. The competing explosives were—ordinary powder, dynamite, tonite, Espir's powder, and cotton-powder. The Espir's powder and the cotton-powder were more freely discussed as to their effects on account of their novelty, and were generally approved of by the practical men present. The Espir's powder did excellent work, and compared very favourably with dynamite in its effects, but has the advantage of being very much cheaper and entirely free from any danger during carriage, or when used in blasting operations. On account of the great cold the dynamite was found to be frozen, and had to be thawed, which caused great delay in the day's proceedings. It was particularly noticed that the Espir's powder exploded very "plumb," with an unusual tendency to play downwards, which was duly appreciated. The other explosives also did good work, but these experiments being mainly to test the economic value of the various competing substances we must hold over a full report until next week.

BRAKE APPARATUS FOR COLLIERIES WINDING ENGINES.—On the axle of and close alongside the winding drum, Mr. THOMAS BURNS, of West Leigh, proposes to have a brake drum or rim, the circumference of which is preferably made of logs of wood. Immediately beneath this drum (but from 6 in. to 1 ft. on one side of the centre line and parallel with the axis) is a beam or girder supported on brickwork or other solid foundation, and carrying the fulcrum of two or more strong brake girders or levers, each of which is provided with a wooden or other brake block acting against the under surface of the brake drum below the centre line of the axis. These brake blocks have holes drilled or formed on their upper surface to contain sand, which will keep the surface of the brake drum or rim clean and free from grease. The brake levers or girders are several feet long (say, about 10 times the distance between the centre of the brake block and the fulcrum), and near their free ends each is connected by a link and a short lever to a shaft, on which is also keyed a hand lever, the links being provided with regulating screws to adjust the pressure as the brake blocks wear away. The short arms of the hand levers are weighted, and from the handle of the longer arm of each lever is hung a rack provided with a foot plate or treadle and a catch. When the engineer or brakeman desires to apply the brake he presses down the first hand lever by means of his hand and foot, and so applies the first brake block, which is held by its catch. If this does not exert sufficient power he then pulls down the second hand lever, next the third, and so on, according to the amount of brake power required. On releasing the catches the brake blocks fall out of contact with the brake drum or rim, and the winding drum is free to revolve.

THE SOCIETY OF ENGINEERS.—The twenty-fifth annual general meeting of the members of this Society was held on Monday, in the Society's Hall, Victoria-street, Westminster. The retiring president (Mr. R. P. Spice) occupied the chair, to which he has been elected two years in succession. The following gentlemen were balloted for and duly elected as the council and officers for the ensuing year:—As President, Mr. J. Bernays; as Vice-Presidents, Mr. O. Horsley, Mr. T. Porter, and Mr. J. Church; as ordinary members of council, Mr. S. Cutler, Mr. F. E. Duckham, Mr. F. W. Hartley, Mr. A. Rigg, Mr. W. Schönheyder, Mr. J. Walker, Mr. Perry F. Nursey, and Mr. C. Gandon, the two last-named gentlemen being new members of the council; as honorary secretary and treasurer, Mr. Alfred Williams; and as auditor, Mr. W. H. Bennett. The President announced that premiums of books had been awarded to Mr. C. J. Alford for his paper on "The Mineralogy of Sardinia," and to Mr. J. Andrews for his paper on "The Strength of Wrought-iron Axles." The proceedings terminated by unanimous votes of thanks being passed to the President, council, and officers for 1879, which were duly acknowledged by them.

REPORT FROM CORNWALL.

Dec. 11.—Once again the upward current of the tin standards has received what may be regarded as a check, but which after all is of very small importance, for the market is firm, and with still a forward tendency. The advance of 4*l*. in the standards consequent on the Banca sale was reduced to one of 2*l*. by a drop of that amount on Saturday last, but as the margin between the smelters and the miners is still more than usual, and as higher prices are said to have been paid, this reduction after all is little more than nominal. Beyond this we are likely to see little change until the termination of the now rapidly approaching Christmas holidays. Just now fat stock and cattle shows are in the ascendant, and will be in all likelihood until the Mining Institute reopens the ball by its annual meeting at the close of the present month.

A good deal is said about the starting of new mines and the reworking of old ones, but with regard to some of the ventures, at least, where prospects have been freely canvassed, much has to be done until matters take a practical shape. One of the features which has excited considerable interest is the discovery of tin at Roche in an old mining district which centuries ago was very productive, but which has fallen off very much from its old state. In this locality there have been found from time to time not only well defined and rich, though generally narrow lodes, but extensive and valuable deposits akin to the "stockworks" of the German miners, and there seems very good reason to regard this new discovery as prelude to the resuscitation of mining in this immediate locality. From Devon we learn that the bed of manganese lately discovered at Newton St. Cyres is likely to prove of considerable value. St. Cyres was once the most productive manganese districts in the kingdom, but the old deposits have been long since practically exhausted.

Now that machine boring is an accomplished fact, it is high time that something more should be done to facilitate its introduction where it is not practised, and its extension where it is. Many mines that would be likely to benefit largely from the use of rock-borers are hardly in a position to provide the gear for themselves, and to pay the cost of an apprenticeship, which must be met somehow when machinery is introduced, to which workmen are unfamiliar. Then on the other hand is the system under which the rival makers enter into what in a certain sense are competitive contracts satisfactory. We are, therefore, very glad indeed to find that under the auspices of Mr. Henderson a rock-boring company is to be formed which will undertake of course, purely in a business point of view, to carry on machine boring by contract in such mines as may seek its services. The general character of Mr. Henderson's proposal is well and thoroughly set forth in his remarks at the initiatory meeting over which Capt. Teague presided.

Mr. Henderson, premising that he had three contracts, and could speak of boring-machines with considerable confidence, suggested the formation of a rock-boring contract company, on the Cost-book Principle, the nominal capital to be 5000*l*., in 500 shares of 10*l*. each. He went on to observe that the great progress recently made in the working of the mines by the aid of rock-boring machinery had induced many proprietors of rock drills and air-compressors to undertake rock boring contracts, not perhaps so much for the purpose of making large profits as to exhibit the efficiency of their respective machines, and thereby to get them introduced to the notice of the mining public. These isolated contracts had been taken probably in many instances under considerable difficulties, requiring large outlay for plant, yielding it might be returns inadequate to support the organised staff necessary to properly carry out the work entrusted to them. To remedy this evil, and to bring rock-boring machinery into more general use

by adopting a more extensive, and consequently cheaper, system, he suggested the formation of this rock boring company, its object being to take contracts on a large scale for aiding in working mines or quarries by means of the most efficient machinery to be obtained. This machinery will consist of rock-drills of various sizes adapted to the nature of the ground, to be selected as required from the company's stock; air-compressors, drill stands, air tubing, and all requisite appliances, together with the usual machinery in a small fitting shop. At present smiths and founders' charges pressed heavily on small contractors. The head-quarters he proposed should be situated in the centre of the mining district, with branches as the business extended. In cases where two or three mines were contiguous one large air-compressor would suffice for the whole. A great saving would also be effected in the number of "stand by," or duplicate drills, and in superintendence the monthly outlay would be comparatively small. With a company thus established mine adventurers would no doubt greatly prefer letting the sinking of their shafts, driving the levels, and stoping the ore ground to undertaking such work by machinery themselves as heavy outlay would be spared them. To start the concern his firm would be willing to transfer their contracts at West Basset, Bottalack, and East Pool, with all the plant and machinery, thus enabling operations to be forthwith commenced. No premium or bonus being asked they suggested that this machinery should be taken at a valuation. Starting on such a basis there is no reason why this company should not be a very profitable undertaking to its shareholders, as it will unquestionably be a great boon to the mining interest. We quite agree, however, that the limited liability principle is the best for such a scheme, and are glad to see the promoters took this view. The cost-book is the proper system for mining where the capital must remain, more or less, an uncertain quantity, and there needs to be considerable reserve power, but a concern of this character is quite a different affair.

TRADE OF THE TYNE AND WEAR.

Dec. 10.—The Steam Coal Trade has been good during the past week, the exportation of coal from the north-eastern ports having been much above the average for the season of the year. There is a demand for this steam coal in the market at present, and from the number of arrivals of ships and steamers it is expected that most of the works will be well employed for some time to come. The shipments of coal and coke at Tyne docks have also been large. In Durham there has been an increasing demand for coal, and most of the pits have been worked full time. There is also a marked improvement in the coke trade. The Consett Iron Company have re-lighted most of their coke ovens, and it is expected that two of their pits which have been closed since the spring of the year will be started again shortly. At Shield-row new coke ovens are in course of erection.

It is remarkable that the severe weather has not caused any advance of consequence in the London coal markets for sea-borne coal. This is attributed to the "bearing" operations of the "ring" of coal merchants in the Metropolis. So far no attempt has been made by the London coal ring to increase the price to the consumer, who in past winters has been accustomed to pay from 28s. to 30s. per ton for what is now offered at from 25s. to 26s.; but though the action of the Northern coalowners has been a benefit to the consumers the producer has not as yet reaped any benefit. The London merchants also sell a large quantity of inland coal as best Wallsend, and by giving a preference to this coal they hope to bring the Northern coalowners to terms, and so retain their monopoly. It is, however, expected that at the next meeting of the Northumberland and Durham coalowners a definite line of action will be decided upon, and they will be able to put a better article on the market and at a cheaper rate than inland coal can be sold in London, and thus the merchants' combination will be powerless, and the Northern coalowner and the consumer will be permanently benefited.

There is a pretty strong demand for house coal even upon the Tyne. The price of Harton best households is about 9s. 6d. per ton. There is a singular absence of trade to London. It can only be accounted for one way—that is, the London coal merchants are fighting against North Country sea-borne coal. It is pretty clear that they are trying to frighten North Country coalowners from continuing the agitation, with a view to giving them (the coalowners) a little more profit and the coal merchants a little less upon the sales made in the London market. It is hoped that whatever fate may befall the agitation to break down the present coal monopoly in London—and there are strong reasons to think that it will succeed—the consigning of coal to that market will close. The fact that the coalowners have taken the course they have is very strongly approved of by all persons interested in the trade in the Quayside.

The Iron Trade continues on the whole firmer, with higher rates, and this is expected to be maintained and continued next year. It is considered that stocks will accumulate during the winter, owing to the reduced shipments, but this will have little effect, as so much iron has been sold forward, while both makers and merchants have confidence in the trade. Manufactured iron is rising rapidly in value, and founders and engine and boiler builders are gradually getting more work. All the great works in Newcastle and Gateshead have secured considerable orders lately. The stock of Messrs. Connal and Co., the warrant storekeepers of Middlesbrough and Glasgow, amounted to 95,800 tons at the former place, where they are receiving about 200 tons daily, and sending out about 100 tons. Their Middlesbrough warrants were sold on Tuesday at 46s. 6d. per ton. In Glasgow their stock is now 399,645 tons. On Tuesday the prices of iron were based on No. 3 Cleveland pig selling at 46s. per ton prompt delivery, and 50s. for delivery over the first few months of next year. For immediate delivery very little business is being done, and in a few instances buyers have obtained their requirements from merchants at 45s. per ton. The old joint committee of equal numbers of representatives from the Durham Coalowners' and Durham Miners' Associations, which ceased to exist on April 5 in the present year, has been by mutual consent renewed, with all its old powers for the settlement of disputes and difficulties which may arise in the trade. Mr. E. J. Meynell, the judge of the Durham County Court, has consented to resume his old seat as Chairman of the committee, which will hold its first sitting on the 12th instant.

INSTITUTE OF MINING AND MECHANICAL ENGINEERS.

On Saturday, by the kind permission of Messrs. Black, Hawthorn, and Co., Gateshead, the works belonging to that firm were open to the inspection of the members of the North of England Institute of Mining and Mechanical Engineers, and a great number of gentlemen availed themselves of the opportunity afforded them. Amongst those present were—Mr. A. L. Stevenson, Page Bank; Mr. Bewicke, Haydon Bridge; Mr. Bell, Government Inspector of Mines, Durham; Mr. Scott, Newcastle; Mr. Hepple-Ouston, Mr. John Cooke, Mr. Wm. Armstrong, Mr. Aubone Potter, Cramlington; Mr. Brown, C.E., Newcastle; Mr. J. A. G. Ross, Newcastle; Mr. Parrington, Durham; Mr. Geo. May, Harton; and Mr. D. P. Morrison, Newcastle; the members of the firm present being Messrs. Hawthorn, Waler, Matthews, and Allen, by whom the visitors were conducted over the works. They first examined Messrs. Hawthorn's new tram-locomotive, which had steam up, and ran upon the railway in the yard. There was only one opinion on the part of the visitors—that the engine travels steadily, smoothly, almost without noise, and with no visible steam or smoke, that it was completely under control, being stopped with the hand brake in a distance of 10 ft. from a speed of six miles an hour, that these results were extremely satisfactory, and that the engine is well adapted for the purpose for which it has been designed. Several of the visitors expressed the opinion that the same principle of the compound condensing-engine could be arranged for use in coal mines where the ventilation is tolerably good, as the heat from the engine would not affect the temperature of the air to any appreciable extent, and the height of the engine could be made suitable for passing along low workings. After seeing the working of the tramway engine, the visitors were shown through the works, in which are a number of locomotives of different kinds in progress of construction. They noticed two which are being built for a glass manufactory on the Tyne; they are very low, with

the object of enabling them to pass under low archways about 7 ft. in height. They are to be employed in bringing sand from the sea shore to the works, each drawing a train of tip-wagons. They are extremely compact, substantial, and handy engines, and well adapted for their special work. Several other engines are also being built for use in ironworks, &c., the order of a firm upon the Tees. The works at the present time employing about 500 men, but are capable of working up to double that number, and during the past week Messrs. Black and Hawthorn have taken a number of large contracts, which will necessitate a large increase in the number of hands employed. A meeting of the members was afterwards held in the Wood Memorial Hall, Newcastle, Mr. A. L. Stevenson in the chair. Mr. Henry Aitkin Falkirk read a paper "On the Extraction of Ammoniacal Liquors from Coke Ovens," the object being to show that these liquors could be extracted in large quantities, and without the use of any form of retort, and also with a larger yield of coke. The members expressed a wish to have further information on the subject, with the view of ascertaining whether or not the arrangement described by Mr. Aitkin was not only new, but also commercially valuable, and Mr. Aitkin undertook to give the information required after experiments.

Mr. D. P. Morrison, of the Midland Steam Boiler Inspection and Furnace Company, read a paper on "Boiler Accidents and their Prevention." After quoting the opinions of the managers of the various inspection companies and the evidence submitted to the Parliamentary Select Committee, he offered the following suggestions as a supplement to the two previous sections of his paper. An exact register to be kept of every steam boiler or vessel in which any pressure above that of the atmosphere is engendered, such register to be kept by any competent body of men, such as assistant overseers, nuisance inspectors, relieving officers, or other officials whose duties bring them in daily contact with works, factories, or places where steam is employed, this list to be furnished to the Board of Trade by each parish or township; also the register to include the dimensions, shape, uses, and pressure of each boiler, with name and address of proprietor, and that such register be supplemented by particulars to be furnished by the inspection companies in cases where boilers are under their charge, and also that in the event of any boiler explosion or accident notice should be given by the proprietor to the Board of Trade, through the overseers, &c., of each district, and that in case of any inquest being held, full particulars of such inquest should be sent to the Board of Trade. The mode in which such register should be kept, and the times in which the numbers should be revised, would naturally be matters for consideration, and a very important and proper topic for discussion by the members of the Institute, who have under their care such a large proportion of steam generators. The writer concluded with the following points, to which the attention of the members should be mainly directed:—

- 1.—How boilers may be efficiently inspected.
- 2.—Does independent inspection offer additional security.
- 3.—Is Government control of inspection necessary.
- 4.—Is registration by authority advantageous?

Boiler settings and the different forms of boilers in use, their comparative economy and efficiency, were then dealt with, and the evaporative values of the plain cylinder, the Cornish, and the Lancashire types were contrasted with tubular and other systems. In explanation of the writer's remarks models and diagrams were exhibited, and afforded complete sections of the latest improvements in flues and settings. Drawings illustrating the practical advice of local engineers and of most of the leading boiler-makers were also produced.

Mr. Morrison stated that he intends to conclude that series of papers by a paper on boiler construction.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Dec. 11.—We will this week resume our mining journey along the Cambrian Railway. About a mile from Oswestry we see on our right the collieries and works of the Oswestry Brick and Coal Company. These are very old collieries. The upper works at the Drill were worked for many years by the late Messrs. Croxon. The lower ones at Sweeney were first of all worked by the late Mr. David Thomas, an old Oswestry tradesman, and afterwards as a brickworks only by Messrs. Croxon. Good buff-coloured bricks have been made from the clays underlying the Raver and Blackshale coal. At present the works are not vigorously prosecuted, although a Hoffman's kiln and other modern appliances have been erected at great cost. It would have been well if the present owners had, as advised, sunk new shafts in the land adjoining the railway at Weston. These are the lost collieries in this direction. The coal measures at this point passing under the alluvial valleys of the Vyrnwy and Severn, and reappearing some 10 miles to the south-east at Coedway and Asterley, where the upper measures are now worked.

A mile further on we see the hill locally known as Sweeney Mountain; it is nearly the southern termination of the millstone grit. The hill is riddled with quarries, some of which seem to have been worked nearly 1000 years ago, some of the old fortifications and other ancient buildings of Oswestry having been built of stone derived from thence. This usually barren geological formation is here charged with fossils. Several attempts have been made to utilise the sandstone for glass making, but hitherto without success.

Arriving at Llynelys Station we see a valley opening out on our right, and the dense smoke hanging over it in places betoken numerous limekilns. It is a busy valley; 3 or 4 miles up it are the furthest and highest limestone quarries—the Nant Mawr Quarries of Mr. R. S. France, where a fine section of the limestone beds right down to the Lower Silurian rocks, which unconformably underlie the limestone here, is exposed. Nearer is the fine Cooper's Rock Quarry of Savin and Co., followed by those of Mr. J. R. Williams, then come those of the Farmers' Supply Company, and nearer the railway another quarry—Dolgoch—belonging to Savin and Co. The three first quarries are worked in the lower beds of limestone, which yield the best fluxing stone and the purest lime. The Farmer's Supply Quarries are worked in the middle beds and Dolgoch in the upper beds, where there is much bituminous and phosphate matter. A branch railway runs along the quarries, and Nant Mawr is served by a branch from the Potteries Railway.

Between Llynelys and Llanymynech stations a considerable hill extends on our right for three miles. The portion nearest Llynelys is Crickheath Hill, and the further end, Llanymynech Hill, which forms the southern termination of the North Wales limestone belt, with its numerous and extensive lead mines. Old limestone quarries, with levels and shafts, the indications of former copper mines, line the side of the railway, and on the hills there are many more shafts and levels, with a great cave, which are supposed to be the remains of a great copper mine.

The only active explorations going on at present are those of the New Crickheath Lead and Copper Mining Company. A rock-drill is here busy at work, doing about 40 yards of tunnelling a month, the total drivings extending about 1300 yards. The works are under the care of Mr. J. H. Henderson, and at present several headings are in ore ground. One especially shows a nice looking lode. The southern escarpment of the hill is scooped out with great limestone quarries belonging to Savin and Co., and numerous inclines, tramways, sidings, wagons, and great heaps of limestone by the side of the railway and canal indicate the extent of the trade. On the other side of the hill a great boss of greenstone is thrown up against the limestone, and is quarried to some extent for stone for building and road-making. Crossing the Rivers Vyrnwy and Severn we see a few miles further on the great mass of the Breidden Hills rising from the right bank of the latter river. A portion of this hill consists of similar greenstone to that just referred to. Indeed, it is evident that a great sheet of it underlies the whole district, portions of which are thrown up here and there. It is the greenstone that in other parts of North Wales lies at the base of the Llandello strata. There is an extensive quarry in it at Breidden, which was opened by Mr. R. S. France, and which is now worked for roadstones and occasionally for paving setts. It is dark greenstone, speckled with white. The quarry is approached by the Breidden branch of the Potteries, Shrewsbury,

and North Wales Railway. The different beds of this greenstone are well displayed in a quarry worked on the upper side of the town of Welshpool, and their adaptation for building purposes is well shown in several buildings of this town, where we make our second halt.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Dec. 11.—Manufacturing and domestic fuel in South Staffordshire is this week in under supply. The freezing of the canals has caused the railways to be taxed to their utmost, and consumers cannot get all they want. The forges at not a few of the ironworks are at a standstill for lack of fuel, and if the frost should continue serious inconvenience will arise. Where the weather offers no impediment the collieries are in full swing. Prices are firmer this week than last. Pig-iron makers are well booked forward, and at the meetings of the trade this week they were refusing further contracts. The Lilleshall Company, of Shropshire, one of the chief all-mine producers, are understood to have closed their books some little time ago. Prices were higher for all descriptions: 27. 15s. may be quoted as a fair price for cinder pigs, short weight. The hematites of Barrow make were officially 57. per ton, and Tredegar pigs 47. 10s. This is an advance since last report of 10s. on the former and 2s. 6d. per ton on the latter. In both cases, however, agents refuse orders. Finished iron makers are busy in all departments, and for all qualities. Plates, perhaps, are selling less freely than most descriptions. The leading "list" houses, such as the Earl of Dudley's and Messrs. William Barrow's, are refusing to accept any orders except at the prices which may rule at the Quarterly Meetings to be held in Wolverhampton on Jan. 7, and in Birmingham on Jan. 8. The manufacturers of high-class sheets have met, and declared prices up 17. per ton. They are mostly employed full time, though orders at the advance are not very numerous. By reason of the advance ironworkers' wages in best sheet mills and forges are this week higher by 5 per cent. Tin-plate orders are arriving slowly. This trade has decidedly fallen off of late.

The Casson-Dormoy puddling-furnace, of which Mr. Smith-Casson, of the Round Oak Ironworks of the Earl of Dudley, is the patentee, is getting into increased favour. The Weardale Coal and Iron Company, at Spennymoor, are just erecting three more, which will bring the number in operation there up to eight, forming two complete forges.

The Coal and Iron Trades in North Staffordshire are in an improving condition from week to week. The demand is markedly increasing, and advanced prices are being secured. It is likely that the colliers will secure the 10 per cent. advance which they have given notice for. At a large meeting of the men, held at Hanley, on Tuesday, the action of the delegates in serving the notice upon the employers was approved.

IMPORTANT CASE UNDER THE MINES REGULATION ACT.—At West Bromwich, on Tuesday, before Mr. Haden Corser (deputy stipendiary), Isaac Law, proprietor of Wotton Lane Colliery, was charged with neglecting to observe the rules of the Mines Regulation Act by not providing adequate ventilation in the colliery. Mr. Walker, of Wolverhampton, appeared for Mr. Baker, Government Inspector of Mines, at whose instance the summons had been issued, and said that on Sept. 16 last, Edward Orgill, the overman at the colliery, inspected the mine, and found some gas in an air-head about 6 ft. from the gate road. He told a miner named William Reynolds to brush it out before he commenced to work, and not to take a lighted candle into it. Reynolds, however, went into the air-head and an explosion took place, by which Reynolds was seriously burnt that he died on Sept. 22. Defendant was, therefore, summoned for not providing sufficient ventilation in that part of the workings. He called a miner named Owen, and the overman, in support of this statement. Mr. W. B. Scott, the Assistant Inspector of Mines, said that he examined the workings after the accident occurred, and he was of opinion that the ventilation was not sufficient. Mr. Slater, for the defence, urged that defendant had taken all the precautions he reasonably could, and that the blame lay on the poor man who had lost his life owing to the explosion, and that the ventilation was as good as could be. The stipendiary thought defendant had taken all reasonable precautions, and dismissed the case.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Dec. 11.—There has been a meeting of colliers' delegates during the past week to consider the forming again of a sliding scale committee. The associated masters, it will be remembered, have already expressed their willingness to agree upon a new scale to regulate wages. At the meeting of delegates, held at Aberdare, the number of miners represented was small—only about a fifth of those in the district—but still it may be taken that the principle was affirmed. Probably the other four-fifths will come round to the same way of thinking. But then the question arises, on what base of wages is the scale to be formed—at present? To say the least, the men may grumble if this is done; but it is to be hoped, now that trade is improving, that no rash action may be taken, or a retrograde movement will, doubtless, set in. The meeting went so far as to appoint their representatives on the joint committee of masters and men. It is not known whether the house colliers of Monmouthshire will join in, and steps are to be taken to ascertain.

An explosion in the Rhondda Valley, at the Rhondda Merthyr Colliery, Treherbert, has taken place, by which a man has been severely burnt.

The Iron and Steel trades continue to show an improvement, and a glance round at the various works shows conclusively that better times have come. "Straws show which way the wind blows," and there are many of these now being wafted in the right direction. As a matter of fact, although Spanish ore is arriving in increasing quantities, it is not sufficient to meet the demand, and prices have gone up. The demand for iron and steel has kept good, and for rails prices have slightly increased. There is still a good request for steel blooms, old rails, rail ends, scrap, &c., mainly on American account, although it is evident that there are quantities of imported material stocked there. The bar trade is again showing signs of revival, and the make is larger. Clearances during the last few days have been mainly to India, Italy, and Spain. Pig-iron sells at about late rates, and the make is somewhat larger. The news from Cyfartha is reassuring, no less than four mills out of six being in full operation, and two out of five forges. The want of skilled labour is said to be felt at this gigantic establishment, although there is certainly no lack of ordinary hands. The Ynsfach Works belong to Cyfartha, but are situated about a mile off the main works. The blast has been put in, and the first casting of pig has been made. As yet only one furnace is going. At Tredegar another blast-furnace has been blown in, and several more will follow suit. There are vague rumours as to one or two works, one being that the Lion Forge, Nant-y-Glo, the property of the Nant-y-Glo and Blaenau Company (Limited), is likely to be sold, and another that enquiries are being made by a firm with regard to the Penydarran Works, Merthyr. At Dowlais, Rhymney, and other works business is good. There is very little change to note in the tin-plate trade. Prices are not quite so firm, but the demand is tolerably well maintained.

The Coal Trade is improving so far as the demand and shipments are concerned; but as yet no material advance can be noted in prices. The enquiry for steam qualities continues brisk, but the supply is evidently more than equal to the demand. The collieries are generally better employed; but in some cases they are only working two or three days per week. The demand for house qualities is brisk; but, although retail prices have gone up, the same cannot be said so far as colliery proprietors are concerned, although quotations show an upward tendency. At Harris's Navigation Colliery and Penrhynceiber the new workings are being rapidly opened out, and at Pentwynmawr steps are being taken to re-open that old pit. These are but solitary instances of the great development which has of late taken place in colliery enterprise. Patent fuel is somewhat quiet.

The formal opening of the Glan-yr-Afon Tin-plate Works took place on Tuesday, the buildings, which are substantially erected near the Clydach Railway Station, being well situated for extension as found desirable. The amount of energy displayed by the executive of the company has been most creditable, the first tin-plate having been made only three months after the laying of the foundation stone. Two mills are already going, and it is contemplated to start the third, but the striking achievement on Tuesday, and which it is believed has not previously been accomplished, was the completion of the whole process of converting the iron into tin-plate in 44 hours.

The process usually occupies a week, and Tuesday's experiment was merely to show what could be done, and not with any intention of working in this manner in the general way. It may be mentioned that from beginning to end the work was carried out under the superintendence of one man—Mr. Jenkins, the managing partner—who assisted in every succeeding process. A new system of annealing, patented by Mr. Jenkins, was most successfully adopted. By this process the work is done much more rapidly than by means which elsewhere prevail, while a great deal of the cost consequent upon the wear and tear of annealing vessels is avoided, as these pots are placed in the furnace only for a very short space of time. In the carrying out of this process, again, the same degree of heat as formerly obtained is not required, and thus a saving is effected in the item of fuel.

REPORT FROM THE FOREST OF DEAN.

Dec. 11.—There is little that is new to report since our last communication. One event of some importance, however, has taken place—the advance of the price of coal another shilling per ton, so that coal is now higher in price than during the past summer by 2s., but we doubt the wisdom of the second advance, as its tendency has been to check the flow of the trade. The Welsh coal proprietors are reported to have only advanced their coal 6d. per ton altogether since the past summer, which is in their favour in a business point of view, seeing that their prices invite orders, whereas 1s. 6d., as compared to 6d., presents somewhat of a damper on the merchants as regards trading in the Forest. If, however, the cold weather continues it may induce the Welsh coal masters to advance their coal in price, and in that case the Forest trade may more successfully compete. The new bridge over the Severn has demonstrated the wisdom and business prescience of its projectors and shareholders, as trade in that direction has so far been of a very encouraging description. A number of new markets have been opened by its completion, and old ones rendered more accessible than when Forest coal had to go round via Swindon to the south and south-west towns and villages. The change of route has led to a considerable reduction in the rates, so that the prospects of trade in Forest coals in the districts indicated are very much improved, and the quantity of coal which has already been sent over the bridge is truly encouraging.

We rejoice, too, that the tin-plate works at Parkend were to start afresh on Tuesday last; and, further, it is expected that the iron blast-furnaces, purchased by a new company, are likely to be set a going at an early date. The same company has taken the Sewdley Works, which are to be employed exclusively for the manufacture of steel. Hopes are expressed by those interested in the character and welfare of the Forest that the new company may be lucky enough to have those under them who practically understand carrying on the business, seeing that want of success in numerous past instances has arisen through want of such persons to manage. The Sewdley Works are being prepared for re-starting in good earnest. The forges and tin-plate works of the district are fairly in active operation, but trade in iron needs much greater encouragement to lead to further development in mining and smelting of ore. The season has led to renewed attention to railway schemes. The Great Western Company has revived the proposed Coleford and Monmouth railway, and notices have been served on tenants and others occupying or owing land on the route, and it is said that the company has now nearly the entire land for the road in its possession; but the public faith has been so many times mocked in the matter that little confidence is felt even now that the company intend commencing operations for construction in earnest. Some delay also will attach to the completion of the Whimsey and Mithelstan Road line. It was intended to have had it ready for opening by the new year, but the necessity for re-laying a portion, and some other alterations, will have the effect of delaying the opening till the end of January or the month of February. It has been a most unfortunate and expensive line, although only a trifle over 4½ miles. When finished, however, and opened it will considerably add to the conveniences of the Forest trade and Forest population. The district has long needed the iron road accommodation, which now seems likely to be rather liberally supplied, if all the proposals now before us are ultimately duly effected.

Original Correspondence.

THE RICHMOND MINE.

SIR.—Shareholders should be officially informed that a discovery—neither the value nor extent of which can even approximately be estimated—has been made in the Tip Top Mine, the most valuable section of the company's property. We are writing in the interest of bona fide shareholders when we urge upon our board the absolute duty on their part of acquainting their constituents—the shareholders—that this discovery has been made. From the large number of enquiries that have been made of us from client-shareholders, it is quite clear that the cablegram, which very often does not appear until published in the *Mining Journal*, does not meet the necessities of the case. We do not blame the directors, as they may be unaware that shareholders may, and do, sacrifice their shares because not communicated with directly from the company's office. With your permission, Sir, we shall in future forward to you for publication the private information that reaches us from Eureka.

CRAWFORD, HARVEY, AND CO.,

London, Dec. 11.

Stock and Share Brokers.

THE MINING INTERESTS, AND THE RESULTS OF ADVANCED PRICES FOR METALS.

SIR.—There can probably be no industry referred to so grasping in its scope or so refreshing in detail as that of mining. This is an industry that stimulates thrift, employs the masses, adds to the accumulative wealth of the nation, while fruitifying commerce, manufacture, and trade, in all its various applications and manipulations. The movement in advanced prices for iron, coupled with the demand of America and the whole world in general for the product, led the van as regards tin, copper, spelter, and lead. These metals have advanced in prices so as to secure dividends to numerous mines, and *de facto*, in the subjoined cases to create profits unprecedented in all other departments of industrial pursuits. I allude more especially to Wheal Crebor, East Pool, South Frances, West Basset, Dolcoath, Tincroft, Carn Brea, South Condurrow, Wheal Eliza, Wheal Pevor, Roman Gravels, Leadhills, Tankerville, Van, Great Laxey, Devon Great Consols, and South Caradon, among the dividend mines, while the subjoined as prospective properties are deservedly worth the attention of capitalists—namely, Lady Ashburton, Lead Era, Prince of Wales, East Crebor, Bwlch United, Bodidris, East Caradon, East Craven Moor, Parys Mountain, Bedford United, and West Pateley Bridge. In addition to these are three or four sets about being launched into companies to work the West Caradon and Craddock Moor, another shallow mine in the same district, with a productive lode 3 ft. below surface, and the East Dolcoath, capable of returning 20 tons of tin monthly. These will probably prove the prizes of new undertakings.

Wheal Crebor, from 2½ six months ago, sprang to 10½ per share, and still stand at 7½, an advance in market value of 30,000£, or 15,000£ in half a year only. East Pool, 9½ per share in July last, is now quoted 22½—a rise of 144½ per cent. South Frances, during the same period, rose from 7 to 11½ a share—say, 65 per cent. West Basset, from 4½, stands at 11½ per share, equal to 170 per cent. Dolcoath, from 20½, has risen to 55½—an advance of 155 per cent. Tincroft, adjoining, has doubled in price; while Carn Brea, standing still eastward, has advanced 110 per cent. South Condurrow has improved 20 per cent. Wheal Eliza has doubled its profits, yet the shares are rarely dealt in, and it is a matter of negotiation to secure them at all. Wheal Pevor, during the half year, sprang from 9½ to 21½ per share, and now in demand at 18½ to 19½ per share. The foregoing, excepting Crebor, are all tin mines; and as that metal, during the half year, has risen from 64½ to 98½ per ton, the future profits will probably lead to great and increasing dividends. Devon Great Consols are quoted 7½ per share, against 2½ in July last—a spring of 275 per cent. Again, South Caradon has advanced 40½ per share. These have proved the two most profitable copper mines in the west over the past 30 or 40 years, the former having divided dividends of 1,195,520£, on a capital of 10,240£, and the latter 744½ 10s. on each 512th share, with 1½ 5s. only called up—i.e., 381,184£ on a subscribed capital of 640£.

The following lead mines have greatly advanced in market value, and show great prospective vitality—Roman Gravels, 50 per cent.; Leadhills, 200 per cent.; Tankerville, 100 per cent.; Van, 60 per cent.; and Great Laxey, 20 per cent. Six months ago pig-lead was 13½ 7s. 6d., against 18½ per ton at the present time, an advance of 4½ 12s. 6d. per ton, while spelter has sprang from 16½ to 19½ per ton. Hence lead mining has received a great impetus, as the mines referred to yield 100, 200, 300, and even 500 tons of lead ore monthly, besides large quantities of blende, the ore of spelter. Their gains

must necessarily augment, and dividends increase in proportion. There has been a large business doing in the Lead Era shares, the development has been somewhat retarded by water and the weather, but important points are about being realised, while the results are keenly watched by experts and practical authorities. This is regarded as an early important prize. The Prince of Wales and East Crebor have recently been introduced under favourable auspices, and probably shares will advance. Bodidris, East Caradon, East Craven Moor, and Parys Mountain should be parted with caution, for points of great promise are being developed, hence early and important discoveries may at any moment be made, and especially at the latter mine. Bedford United should claim attention, and West Pateley Bridge, in Yorkshire, is likely to enter the Dividend List during the year 1880.

Bwlch United exhibits every evidence of prospective expansion. The ore—rich silver lead—exists in the 60, 70, 80, and 100 fm. levels, and point to increased mineral wealth in depth. The management is practical, and the system of development all that can be desired as regards efficiency and economy. Boring machines, stone-breakers, and improved dressing paraphernalia have been introduced with permanent advantage, while the local manager has his every energy enlisted in the concern. Lady Ashburton has been launched as an especial enterprise of merit. There is strong evidence of argentiferous deposits of unusual strength and product. These are easily and cheaply developed, while the “pockets,” ranging from 500 to 2000 ozs. of silver to the ton of ore, soon accumulate large prills of the pure metal. The adjoining mines afford very favourable analogy, not only in respect to silver, but likewise copper in bulk and in paying quantities. The sett is fraught with various minerals, development can permanently be effected at the computed outlay, the future chances of success are unusually good, and the management sound and practical.

The West Caradon and Craddock Moor Mines are about being amalgamated, and probably the amalgamation of the two in one concern is likely to lead to results almost unequalled in mining pursuits. There is also a copper mine in the same parish, and called “St. Clear” Mining Company, upon the Cost-book System. The shares are issued at 20s. each, and we shall be much disappointed if the price does not rapidly advance to 5½ per 1024th share. The copper ore is found within 3 ft. of the surface, and the lode (a champion one) is strong, well defined, and composed of the usual constituents of the large productive lodes in South Caradon, Par Consols, Powey Consols, the Crinnis, and the Devon Great Consols.

East Dolcoath is now being formed into a company, in 16 shares of 250£ each, and it is stated by acknowledged authorities that 20 tons of black tin (say, 1000 tons monthly) can be returned so soon as the water is pumped out. To this undertaking we would direct the attention of your numerous readers.

R. EMERSON.

Cornhill, London, Dec. 12.

MINING IN CARDIGANSHIRE.

SIR.—It is with great satisfaction that I have lately witnessed the renewed and deserving vitality which is characterising the development of the silver-lead mines in this highly mineralised county. After the great and unprecedented depression which has so seriously affected all trades and channels of industry, it is not surprising that the mineral resources of the country should be called into play on the first signs of returning prosperity, and with the rash speculative mining of past years as a warning (in many cases a too dearly-bought experience) a more rational and legitimate development of this industry may now be looked for. Cardiganshire has for centuries been known and famed for its mineral treasures; as long ago back as the reign of Charles I. the silver with which its lead is so highly impregnated was coined at a mint established for the purpose in the county, and Roundheads and Cavaliers have alike been paid for their allegiance from this source. It is not many years ago since, on the discovery of the riches of the Van Mine, Montgomeryshire became for the time first mining favourite of the Welsh counties, and Vans hailing from all points of the compass—Central, Consolidated, United, and in every form of relationship to the great original, sprang up with the spontaneity of mushrooms (not unlike the great Cornish copper mine of to-day) to win the confiding investors into visions of wealth, which yet remain to be realised, while from our American cousins we purchased with an eagerness akin to lunacy mineral grants in many cases considerably smaller than an ordinary country churchyard, but which, according to “Scaddio,” contained hidden treasure sufficient to pay the National Debt. Excuse this retrospect; the past, with its follies and mistakes, should belong to history, but the experience we have gained from it will, I trust, prove of service to us in the future. As I have said, ten years ago Montgomeryshire stood first favourite. I think I may now claim the post of honour for Cardigan; in the olden time it was the favourite, and history repeats itself. There are many mines in the county which have long lain idle, but are now springing into active life and being supported by adequate capital, which shows that the mineral treasures of the county are not forgotten by the best and most legitimate class of mining investors.

Frongoch, an enterprise of recent date, commenced to make returns in September, and I am informed that by the close of the year its ore sales will amount to close on 8000£, while the market value of the shares has risen 100 per cent. on the nominal value. South Darren, with its fine prospects, stands in high favour if one may judge by the high premium its shares command. Cwm Brynno with energetic working should render a good account; I believe the old working of this mine realised 130,000£. The Lisburne Mines were probably the most prolific in the county, having returned ore to the value of 2,000,000£. At Bwlch United they have made a grand discovery of silver-lead at the 100 fm. level, thus proving the mine in depth, and the favour with which it is held in public estimation is shown by the shares commanding a premium of 200 per cent. Bryn Glas is, I believe, the last addition to the mining enterprise of the county, and it comes well recommended, and with a great deal in its favour to entitle the undertaking to a cordial reception at the hands of the investing public. The mine, although only 22 fathoms deep, has made considerable returns, and is reported to have been left very rich. The capital is small, but in my opinion ample, and is not over-weighted by an extravagant amount for the purchase of the mine machinery and buildings. With good management such as I hear has been secured for it this mine should add another to the many grand successes for which the county of Cardigan is famous.

Crosby Hall Chambers, E.C., Dec. 11.

J. SADLER HOUSTON.

ENGLAND AND AMERICA.

The subjoined letter, which refers to matters in which a large portion of the community are interested, has been addressed by Mr. ELLIS LEVER to the Editor of the *Manchester Guardian*:

SIR.—Your own columns, as well as those of your contemporaries, have recently borne abundant testimony to the revival of some of our staple industries—especially those of iron, wool, linen, and jute; and concurrently with this revival there appear to be symptoms of a desire, not unnatural, on the part of the workmen in these sundry branches to go “snacks,” as it is called, with their employers in this augmented prosperity. I hope I shall not be considered disloyal to my country if I remark that the trade recovery which we have lately been happy to greet has not sprung, so to speak, from our own loins, but has really proceeded from the action of the American industries, which threw the stone into the stagnant pool, one of the wave circles of which has reached us here. Now, it seems to me all important that this American stimulus, which to an Englishman ought scarcely to be considered a foreign one, ought not only to be welcomed on its arrival, but, further, be fostered and husbanded as long as possible. Query, if the operatives themselves, in a hasty moment, and fancying that they see a chance, should slay the golden goose, or essay to do so, what, if any, compensation can we look for? It might happen that the fractional difference in the augmented demand of the British operative would suffice to turn the balance once more in favour of the Western Continent, and blow in again many blast furnaces in the States, some 400 of which, I learn, had been for some time extinguished. The same remark would apply to coal and other industries, but the allusion to iron will suffice for my present purpose, although

my own knowledge of the coal trade, and my recent personal inspection of that special industry in the States, would enable me to dilate upon that too, were it necessary.

Clearly the harvest shipments of the United States are now drawing capital away from Europe to western titles. The Times of this date tells us of some 12,000,000£ sterling which, during the last three months have found their way to America, and it is inevitable, and only natural, that some of this treasure will be utilised for revivifying the dormant enterprise above alluded to, and thereby blocking neatly, as cricketers call it, those British energies which have recently been bowling along so briskly. Now, I am not deprecating either the higher values which the ironmaster is asking for his produce or the augmented wage which his workpeople desiderate, all that I insist upon is that the relief from America to our staple industries, such as iron, or linen, or wool, may be fleeting and precarious, and that in one particular only will this relief ever be beyond casualty—namely, in the splendid food supplies with which natural advantages enable the Americans to flood the markets of the Old World. There is no eternal wage level. It was not ordained from the foundation of the world that 30s. per week was to be the pay of an English skilled artisan. If anything could prescribe a wage-rate for working men it would be the price of bread and cheese and beef. So that if, by handling this food supply question between grower and eater with a short rein and minus intermediary postillions, you could mitigate the eating cost, you would consentaneously lower the wage level and the masters would be relieved without any damage to the men. I hope I make myself understood. It seems to me the one sole clean relief which America can yield to the Mother Country. At present there are stumbling blocks in the rich inheritance which our cousins on the other side of the water might afford us. Co-operation is the cry of the day. Co-operation in this case would be an overwhelming remedy; but I believe it would be effectual, and that any one fortunate enough to bring it about would in fact be preaching a new physical gospel to his countrymen.

No one coming in contact, as it has been my lot to have done recently, with Americans of all classes on their own ground, can have failed to learn many lessons which neither books nor magazines nor even newspapers of themselves could teach, and I am sure that any one contributing, in however small a degree, to the nearer introduction of Americans and Englishmen to each other will not labour in vain.—*Piccadilly, Manchester, Nov. 29.* ELLIS LEVER.

[For remainder of Original Correspondence see to-day's Supplement.]

THE VAN MINES—MONTHLY REPORT.

Dec. 10.—As under, please find my monthly report and setting-list: At the 120 west we are crossing north in order to get under and drain the water from the 60 fm. winze, sunk below the 105, and we hope in a day or two to commence rising against the winze. While the water is draining the men are pushing forward the cross-cut to prove the lode, which I am glad to say is very strong, producing large quantities of blende, and occasionally a good stone of ore. We have crossed 21 feet. The end at present is very hard and wet; set to six men, at 180s. per fathom. The 105 west is within 5 fms. of getting under the 150 fm. winze, now sinking below the 90 west. I am pleased to say that we have still a good lode here, worth fully 2½ tons of lead ore per cubic fm. As soon as we have holed with the winze above mentioned we shall cross-cut to prove the full value of the lode; set to six men, at 150s. per fathom. The two stopes in the back of this level, 30 and 100 fms. west of shaft, are set to eight men in each, at 50s. per cubic fm. The lode is on the average 17 ft. wide, and worth 2 tons of lead ore per cubic fm. In the intermediate level, in the back of the 105 west, the men are crossing in search of the lead seen going down in the south part of the lode on the bottom of the 90; set to four men, at 140s. per fathom. The 150 fm. winze sinking below the 90; at present the end is down 11 fms., in a lode worth 25 cwt. of lead ore per cubic fathom. The ground is hard and the water quick, but I have managed to set it to six men, at 200s. per fathom. The stopes in the back of the 90 are without any material alteration in width and produce since my last report. Average width 21 ft. 6 in., worth 1½ ton of lead ore per cubic fm.; set as under—The 140 to eight men, at 42s. 6d.; the 30 to eight men, at 50s.; the 60 to eight men, at 75s.; the 40 to six men, at 40s.; the 20 to eight men, at 40s. The 75 permanent level west of shaft is set to four men, at 75s. per fathom. The stopes in the back of the 75 are on the average 20 ft. wide, worth 22 cwt. of lead ore per cubic fathom; set as follows:—The 100 to eight men, at 45s.; the 80 to six men, at 45s.; the 50 to eight men, at 45s.; the 30 to eight men, at 42s. 6d. I have this month taken two men out of the 80 fm. stope, and set them to drive a level upon a branch of the lode which lies off into the footwall of the 20 fm. stope east in the back of the 75. The said branch is worth for lead ore at present 25 cwt. per cubic fathom. The ground is very hard and rough; set to two men to drive, at 240s. per fathom. The stopes in the back of the 60 are worth 1 ton of lead ore per cubic fathom. Average width of lode 13 ft. 6 in.; set as follows:—The 60 to eight men, at 70s. per fathom; the 40 to eight men, 72s. 6d.; the 8 to eight men, at 70s. The 80 stope, in the back of this level, is worked into the deads and finished, and I have removed the men into the stope which we suspended a few months ago in the back of the 30 east of shaft, where the lode is 12 ft. wide, and worth 18 cwt. of lead ore per cubic fathom; set to six men, at 67s. 6d. per fathom. The cross-cut south at the 30 west has been driven 12 fms.; there is a change of ground in the present end, but no lead seen as yet; set to four men, at 70s. per fathom. At Edwards's shaft I have four men crossing south from the end of the 45 in order to get under the perpendicular of the shaft for the purpose of rising against it. They have about 9 ft. more to cross, which is set to them at 80s. per fathom, and when this is driven I shall set them to rise.—Surface: Our sale of produce takes place to-morrow. Quantities—Lead, 300 tons; blende, 150 tons. Notwithstanding the severity of the weather of late our dressing-floors are in regular work, the frost has not interrupted us at all. We are progressing with the fixing of the engine, making incline, &c., for the purpose of emptying the large slime-pits. The machinery is in good order.—W. H. WILLIAMS.

D'ERESBY MOUNTAIN—MONTHLY REPORT.

Dec. 9.—In the No. 1 adit we have driven in the past month 7 ft. The lode was not so productive for blende as it was the preceding month, yet still a very kindly lode. We have suspended operations for the time being, so as to concentrate our force on No. 5. The lode in the stope at No. 2 is, and has been for some time, divided, and each part is looking well for lead, worth together from 15 to 20 cwt. per fathom. We are strongly of opinion that one part of the lode still remains undiscovered in the level below (No. 3), and it would be a good trial to cut into the stope in search of it; and if we find it the same in the No. 3 as we have it now in the stope it will show a large piece of ground to take away at a profit. At the No. 5 stope, we have opened the stope where we made the communication from the upper workings of the old men to the lower, have cleared away the old debris, and commenced sinking. We have also made a communication between the level and the large chamber on the north end of the stope, and fixed a tackle for winding the stuff from this part, which will not interrupt or interfere with the sumpmen in sinking the stope. We have laid down rails from the Gorse shaft to the stope, which will enable us to dispense with wheeling, and also with silling the stuff the second time. We have now nine men in the stope and six in the stope, who are working regularly night and day without let or hindrance to one another. The lode continues much the same as we have described it many times before. As far as we can yet see the lead bearing part is from 10 to 12 ft. wide, with a beautiful matrix of quartz and carbonate of lime. The lead for the most part is in solid patches, varying in size throughout the whole of the above named width. Since we have commenced working on the ground the lode has improved for lead, and is worth now 1½ ton per cubic fathom, and from what we can see we believe that as we go down it will continue to improve. However this may prove we can say most assuredly that the mine never looked so well as now, and the prospects would never bear any comparison with the present. We believe that the success of the mine is now established, and it only remains to consider and adopt the best means for getting away the largest amount of stuff at the least possible cost. Our present arrangements are as perfect as we could make them under the circumstances, and will serve us for some time; but for a long continuance we shall require either to sink the Gorse shaft to another level, and drive back under the stope, or make a top to the present stope. We should have sampled 20 tons of lead this month had not the dry weather and frost prevented us.—JOHN ROBERTS, W. SANDOE.

LEAD MINING IN NORTH DEVON.—The continual rise in the price of lead is leading to opening out of some promising silver-lead setts in North Devon. There was a time when the old Combmartin Mine was one of the richest lead properties in the kingdom, and aged miners now living at Combmartin speak of the valuable lodes which they have seen in the old workings. Should lead go up to 20£ or 22£ a ton we may hear of several companies being brought out to work different setts on three known lodes.

PHOENIX UNITED MINES (Liskeard).—Increased activity is observable at these mines consequent on the improvement in the price of tin; many additional hands have been taken on, and the returns rapidly augmented, the sales of tin are now nearly 50 tons monthly, and can no doubt be increased. It may be interesting to mention that it was the intention of the late Mr. West in the year 1872, previous to the decline in the price of this mineral, to erect a large stamps at Stows (the western part of the sett), in addition to the one of 96 heads, and another of 64 heads already at work, but the reduction month after month in the price received for black tin, from 87½ to 34£ or 35£ per ton, was sufficient reason for his not carrying out this undertaking, notwithstanding that this part of the mine was

opening up remarkably well, and proving the great Phoenix lode to be productive of tin throughout the entire length of the workings. It is said the company is about to introduce boring machinery for the more rapid development of the lode in depth, and as is the case in other leading tin mines (Dolcoath for instance) the best courses of tin it is found have to be followed in depth. It may be worthy of remark that some twenty years ago these mines were selling copper ore to the value of 28,000l. per annum.

POST OFFICE LONDON DIRECTORY.

The new edition of this invaluable volume for 1880—the 81st year of publication—has just been issued, and continues to grow in size with the population of the great city to which it relates. It has now reached the enormous size of 2913 pages, although on many of these pages as many as 400 names are inserted, so that the amount of information contained can readily be estimated. To explain the system of arrangement and facilities for reference in a work which has been so long before the public would be altogether superfluous, especially as for accuracy and completeness the Post Office London Directory has for many years enjoyed a higher reputation than any similar volume, even although they may refer to smaller cities or towns, and therefore involve considerably less labour in their production. The type necessary to print it would alone represent a large outlay, as it may be fairly estimated that not less than from 15 to 16 tons would be required, and as this costs several shillings per pound, there would be from 5000l. to 6000l. worth in use; the wages of compositors would represent more than that amount, and the cost of collecting the information would be large as compared even with the cost of type and wages, in addition to which there is the paper, binding, &c., to be paid for, so that it is difficult to imagine how with a selling price of only 32s. to subscribers, and 40s. to non-subscribers, it can repay the cost of production at all. The fact, however, that it has now reached its 81st edition explains the matter—it is so indispensable a necessity to the man of business that few can afford to be without it, and hence an enormous circulation is secured. An office without a Post Office London Directory is, indeed, much like an accountant without his books, since the Directory affords the readiest means of ascertaining the names of those with whom it is probable business may be done, and of most speedily communicating with them. The Directory is in every respect equal to those of previous years, and it may be said from a careful reference by way of test that it has been carefully corrected to the latest date.

MONEY.—Mr. James Platt, whose Business and Morality have already been noticed in the Journal, has now issued a similar little volume entitled Money. He states, and there is no reason to doubt his accuracy, that his book will be of little value to those who have read or thought upon the subject; but, he continues, if it bears no mark of originality to the student or the critic, it may, nevertheless, serve as an incentive in causing others to desire a fuller knowledge, and thus by the rousing of curiosity, though having no wealth of light within himself, by having brought before a large body of readers in a condensed form light gleaned from others, a good will have been done, and it is to be hoped a benefit conferred by his indications where the thirst for fuller information may be satisfied. The several chapters treat of money, the origin of money, and what is money? currency, gold money, silver money, paper money, bank notes, cheques, bills of exchange, bank shares, banking exchange, interest, wealth, capital panics, individual success, and national prosperity. The book is one which will prove interesting to a large number of readers.

STATE MINES OF PRUSSIA.—The estimated receipts for the produce of the coal, metallic, and salt mines belonging to the Prussian Government for the next fiscal year are, as appears from a recent debate, 48,198,148 marks, or rather more than 2,400,000l. Considerable complaint was made by some members in the recent debate at the fact that the salt mines, on which 4,500,000 marks, or 225,000l., had been expended during the past 10 years, produced this year only the miserable sum of 98,000 marks, or 4900l., the capitalised value of the salt mines being estimated at 750,000l. In reference to the Upper Silesian coal mines, it was stated that women were still largely employed there, the number at the last enumeration being about 5500, most of whom were young Polish women and girls.

METAL NUTS.—With a view to economise time, fuel, and labour in the manufacture of metal nuts, Mr. T. P. ALLEN, of West Bromwich, proposes to roll the bars from which the nuts are to be punched in rolls sunk to a section calculated to produce a continuous bar of nut blanks, each joined to the other at one of its sides, so that the sides of the bar are serrated down their entire length, each serration producing two sides of the finished nut when of hexagonal form, or three of octagonal; these bars are next punched and blanks cut off from each other; he produces these bars at one heat from the piled or puddled bar; and at the same heat if necessary he punches them and cuts them off ready for screwing. The rolls he employs are sunk and flanged, the sinkings being serrated to form the serrations on the bar in rolling.

LEAD ORES.		Price per ton.		Purchasers.	
Date.	Mines.	Tons.			
Dec. 9—Sentein	50	£13 5 9	.....	The Société Anonyme des Mines et Fonderies de Pontgibaud.
— ditto	25	13 5 9	.....	Nevill, Druce, and Co.
11—Talaroch	45	13 1 6	.....	Adam Eyton.
— Maeswreuddu	10	12 17 6	.....	Quirk, Barton, and Co.
— Coetia Llys	10	12 5 0	.....	ditto
— North Hendre	50	12 5 0	.....	Adam Eyton.
— ditto	50	12 5 0	.....	Walker, Parker, and Co.
— Prince Patrick	20	12 8 6	.....	Adam Eyton.
— Rhydalun	25	12 3 6	.....	Quirk, Barton, and Co.
— Gwernymynydd	25	12 12 6	.....	Adam Eyton.
— and Fawngog	25	12 11 0	.....	Adam Eyton.
— Pant-y-Mwyn	50	13 11 0	.....	Panther Lead Co.
— Van	50	13 13 0	.....	ditto
— ditto	50	13 13 0	.....	Weston, Son, and Co.
— ditto	50	13 13 0	.....	E. C. Goodhart and Co.
— ditto	50	13 16 0	.....	ditto
— ditto	50	13 16 0	.....	ditto

BLENDE.		Price per ton.		Purchasers.	
Date.	Mines.	Tons.			
Dec. 10—Talaroch	300	£5 6 0	.....	Vivian and Sons.
11—Van	50	4 1 6	.....	Villiers Spelter Co.
— ditto	50	3 17 6	.....	ditto
— ditto	50	3 17 6	.....	Swansea Vale Co.

COPPER ORES.

Copper Ores for sale on Thursday next, at the Royal Hotel, Truro—Mines and parcels.—Devon Great Consols 868—Wheal Crebor 439—South Caradon 440—Marke Valley 206—Glasgow Caradon 160—Phoenix 60—Bedford United 58—Gawton 25—East Caradon 15.—Total, 2321 tons.

At Redruth Ticking, on Dec. 4, 1203 tons of copper ore were sold, realising 4322l. 10s. The particulars of the sale were—Average standard, 104l. 14s.; average produce, 6½; average price per ton, 4l. 4s. 6d.; quantity of fine copper, 68 tons 3 cwt. The following are the particulars:—
Date. Tons. Standard. Produce. Per ton. Per unit. Ore copper.
Nov. 6. 1308. 104 1 0. 7½. 24 12 6. 11s. 9½. 258 19 6.
20. 2073. 103 5 0. 6¾. 3 17 6. 12 1 0. 50 9 0.
Dec. 4. 1023. 104 14 0. 6¾. 4 4 6. 12 8½. 63 8 6.
Compared with the last sale the advance has been in the standard 3l. 8s., and in the price per ton of ore about 4s. 6d.

CHEMICALS, MINERALS, AND METALS.—Messrs. J. Berger Spence and Co. (Dec. 6).—Alum: Loose Lump, 6l. 5s. to 6l. 10s.; ground, 7l. 15s.—Arsenic: Best white powdered, 11l.—Bleaching Powder, 7l. 5s.—Borax: Refined English, 38l.—Copperas: Green, 55s.; white, 9l. 15s.—Copper: Sulphate, 22l. 17s. 6d.—Nitrate of Lead, 31l. 10s.—Nitrate of Soda: 15s.—Potash: 11½d.—Saltpetre: Refined English, 24l. to 27l.—Soda: Cream Caustic, 10l. 15s.—Sulphate of Zinc, 8l. 10s.—Sulphur: Roll, 7l. 15s.; flour, 10l. 10s.—Tin crystals, 7½d. per lb.—White lead, 19l.—Barytes: Carbonate, 90s.—Brimstone: Best thirds, 5l. 10s.—China-Clay, 38s.—Manganese: Sulphate, 16l. 15s.—Mineral White, 40s.—Ochre, 5l. 15s.—Oxide of Zinc, 22l. 10s.—Talc, 5l.—Umbur, 70s.—Copper: Best Ingot, 72l.—Lead: Best soft English, 17l.—Pig-Iron, 45s.—Spelter: English, 20l.—Tin, 84l.—Cream of Tartar: Crystals, 125s.; powdered, 130s. 6d.—Charcoal: Best stick, 6d. per bushel; field burnt, 8d.—Globe Steam-Boiler Powder, 15s. per cwt.—Naphtha: Miscible, 5s. 3d.—Resin: Common strained, 5s. 10d.—Ultramarine, 50s. to 100s.

PRELIMINARY ANNOUNCEMENT.

STOBROSS DOCKS CONTRACT, GLASGOW.

MR. ARTHUR T. CROW, Contractors' Auctioneer, Manor House, Sunderland, has received instructions from John Jackson, Esq., owing to completion of contract, TO SELL BY PUBLIC AUCTION, the WHOLE of the VALUABLE CONTRACTORS' PLANT and MATERIAL, Powerful STUD of DRAUGHT HORSES, CARTS, and HARNESS. Date of sale and further particulars in future advertisements, and catalogues obtained at the place of sale and at the office of the Auctioneer, Sunderland.

SALE OF IRONWORKS IN SPAIN.

A PUBLIC SALE of the "SANTA AGUEDA" IRONWORKS is announced at Bilbao (No. 15, Ronda-street), by IGNACIO DE OLACHEA, Esq., for the 15th January, 1880, at Eleven o'clock A.M. The FACTORY is situated at CASTREJANA, district of BARACALDO, province of BISCAY, north of SPAIN, near Bilbao, upon the shore of the River Cadagana, from which it receives its water power. Said river is navigable, and becomes an economical means for the transport of materials and fluvial products. There are a blast furnace, turning out 2500 tons of charcoal pig-iron per annum, the low part of a similar one, four puddling, and two heaters or refiners. The water-fall average is 4 metres and 90 centimetres; its motive power about a total of one hundred horses, and much more in rainy seasons. The MACHINES and BUILDINGS are as follows:—
A two cylinder BLOWING MACHINE, with an air keeper, moved by an hydraulic 18 or 20-horse WHEEL, a devastating train, a large and a smaller cylinder, the whole worked by a 80-horse TURBINE and a STEAM HAMMER, served by the fuel of two of the puddling furnaces.
There are moreover the LATHE DEPARTMENTS and their MACHINES and FORGES, OFFICES, and TWO DWELLING HOUSES for workmen.
Bilbao, 2nd December, 1879.

HONE QUARRY FOR SALE.

TO BE DISPOSED OF, the LEASE of a HONE QUARRY, some years yet to run, with VALUABLE MACHINERY in working order, driven by water power. The hones produced from the quarry are of fine quality, and command a good price. The supply is virtually unlimited.
For further information, apply by letter to H. TUCKER, No. 1, Percy-street, London, W.

BY ORDER OF THE TRUSTEES OF THE LATE JAMES RADLEY.

TO BE SOLD, BY PRIVATE TREATY, the well-known **POCKET NOOK COPPER SMELTING WORKS**, at ST. HELEN'S, LANCASHIRE.

The premises consist of about 2½ acres of land, nearly all freehold. The works, which are in excellent repair, are very complete, and consist of TEN SMELTING and ROASTING, ONE REFINING, and ONE CALCINING FURNACE, with substantial PLANT, WEIGHING MACHINES, RAILWAY WAGONS, STEAM GRINDING MILL, &c., &c., capable of doing an extensive business. The offices, laboratory, refinery, smithy, and store rooms are ample and convenient, and the property has the advantage of railway sidings and canal and road frontage, with seven cottages adjoining.
The brand is well known on the market, and the connection is of the highest respectability.
The stock and current contracts may be taken at a valuation to suit the convenience of a purchaser.
Applications to be addressed to Mr. D. McCOLL, at the works.

VALUABLE FREEHOLD COLLIERY WITH COAL AND IRONSTONE MINES.

TO BE SOLD, either the WHOLE or PART of LESSOR'S INTEREST in a LARGE FREEHOLD COLLIERY in one of the North Midland Counties, also a LARGE AREA of LEASEHOLD COAL, with power to work thereout as much as possible during eleven years, without any further payment to Lessor.
The coal is of high repute in the London and Southern Markets, and the plant is powerful and efficient, and included in the Lessor's interest, and is capable of raising a minimum of 4000 tons of coal per week. There is ample siding accommodation in connection with the Midland Railway Company's Main Line to London.
The Advertiser would be prepared to CO-OPERATE with the PURCHASER in WORKING the COLLIERY, finding his proportion of Capital for such purposes.
For particulars, apply to Messrs. J. and P. HIGSON, Civil and Mining Engineers, 18, Crown Buildings, Beeth Street, Manchester.

IRON ORE ROYALTY.

TO BE LET ON LEASE, the IRON ORE ROYALTY of the "HALLS" ESTATE, in the parish of LAMPUUGH, CUMBERLAND, situated within a short distance of the Whitehaven, Cleator, and Egremont, and Rowrah Branch of the Cleator and Workington Junction Railways.
The Ore Works in the immediate neighbourhood indicate the presence of hematite ore of good quality, and to an enterprising lessee the present is an opportunity seldom to be met with.
Further particulars may be obtained from JOHN DOUGLAS, Esq., of The Grange, Scaresfoot, near Leeds; or Mr. JOHN MASON, Solicitor, Whitehaven, by either of whom offers will be received.

NANT-Y-GLO, MONMOUTHSHIRE.

TO BE LET, ON LEASE, the NANT-Y-GLO IRONWORKS, known as—
1.—THE LION MILL.
With a BEAM CONDENSING ENGINE, 46 in. cylinder, 8½ ft. stroke (incomplete), with machinery for driving three rail and two blooming mills, with standard, rolls, and connections, and cast-iron flooring plates, covered by a main roof in two spans, 224½ ft. by 87 ft., recently re-slatted, and two other roofs, 68½ ft. by 35 ft., and 61 ft. by 31 ft., with boiling or heating furnaces, and four steam boilers. Fitting shop, adjoining, 61 ft. by 30½ ft., with two floors, smiths' shop, 61 ft. by 30½ ft., with eight smiths' hearths.
2.—UPPER MILL AND PUDDLING.
ONE BEAM CONDENSING ENGINE (incomplete), 46 in. cylinder, 8½ ft. stroke, wheel gearing, bed plates for roll standards, squeezers, &c., one egg-end boiler, three tubular ditto (one incomplete), main building, 240 ft. by 51 ft., adjoining buildings, 112 ft. by 28½ ft., and 61 ft. by 28½ ft., with iron roofs, principally unslated, one boiling and fourteen puddling furnaces. Roll turner's shop, adjoining.
3.—MIDDLE FORGE.
ONE BEAM CONDENSING ENGINE, 42 in. cylinder, 8 ft. stroke (incomplete), with machinery for driving two trains of puddling rolls, main building, 225 ft. by 45 ft., adjoining ditto, 104 ft. by 25½ ft., 93 ft. by 15 ft., and 33 ft. by 24 ft., thirty puddling furnaces.
4.—PUDDLING AND PLATE MILL.
ONE BEAM CONDENSING ENGINE, 46 in. cylinder, 8 ft. 4 in. stroke (incomplete), with machinery, &c., four steam-boilers, puddling and boiling furnaces (some in an unfinished state), main building, 278 ft. by 53½ ft., adjoining ditto, 97½ ft. by 32½ ft., 100 ft. by 32½ ft., a considerable portion unslated.
The above are suitable sites for the manufacture of Tin-Plate, Merchant Bars, Wireworks, Rail, Plate Mills, and also Wagonworks.
All are on and have communication with the London and North-Western Railway, and are well supplied with water.
A Colliery adjoining can be taken in addition with either of the above if desired, from which a supply of Fire-Clay for Brickmaking and other purposes can be obtained.
For further particulars, apply to WILLIAM ADAMS, Esq., C.E., Cardiff; or Messrs. COLBORNE and WARD, Solicitors, Newport (Mon.).

WAGON WORKS AND STOCK.

ON SALE, EXCELLENT WORKS at CHORLEY, LANCASHIRE, and LLANTRISANT, SOUTH WALES (recently carried on by Messrs. Baxendale and Heald and Son, Leeds), with all necessary MACHINERY and PLANT, together with LARGE STOCK of STORES and MATERIALS.
May be viewed, or full particulars obtained, on application to Messrs. DAVIES and BEE, Public Accountants, Preston.

FOR SALE, A VERY VALUABLE LEAD AND BLENDE MINE, with PUMPING, DRAWING, and DRESSING MACHINERY, complete.
Also, an EXCELLENT 40 in. cylinder CORNISH PUMPING ENGINE, 10 ft. stroke, with TWO GOOD BOILERS; together with a quantity of other MACHINERY and PITWORK.
Apply to Mr. J. KITTO, Llanidloes, Montgomeryshire.

FOR SALE, A FIRST-CLASS SECOND-HAND 80 in. CORNISH PUMPING ENGINE, with several 11 ton BOILERS.
Apply, WM. BENNETTS, Roskear, Camborne.

PIT SINKING, WINDING COAL, PUMPING, &c.

PORTABLE STEAM ENGINE FOR SALE, with two 13½-inch cylinders, fitted with link-motion reversing gear, large boiler, with or without road travelling wheels, and winding and pumping gear.
Also a double 9½-in. cylinder PORTABLE ENGINE.
A 9½-in. cylinder VERTICAL ENGINE, with winding drum, complete.
An 8-in. cylinder VERTICAL HOISTING ENGINE, with winding drum complete. To be seen at—
BARROWS AND STEWART'S WORKS, BANBURY, OXON.

FOR SALE, A NEW 70 inch cylinder CORNISH BEAM PUMPING ENGINE, 10 ft. stroke in cylinder and 9 ft. in the shaft, with steam case, metallic piston, and wrought gudgeon. The false cover, perpendicular pipes, weight posts, working and nozzle gear all fitted right. A strong substantial well made engine, complete, including cast-iron casings for top and bottom nozzles with bright covers, holding down bolts and wrought-iron caps and bolts for connection to main rod.
Apply to WILLIAM'S PERMAN FOUNDRY COMPANY, PERTINARWORTH, CORNWALL.
Dated Jan. 29, 1879.

FOR SALE, AT NEW PEMBROKE MINE, CORNWALL:—An excellent 25 in. DRAWING ENGINE and TWO BOILERS. TWO SPARE BOILERS. THREE IRON STAMPS AXLES. 100 fathoms FLAT RODS, 3¼ inch. 10 arm CAPSTAN IRON AXLE. A QUANTITY OF IRON PLATES and OTHER MATERIALS.
Apply to Mr. JOHN FELKINSON, Woodlands, Par Station.

IMPORTANT NOTICE.

IN ACCORDANCE with the "Explosives Act, 1875, Section 77, all occupiers of Factories, Magazines, Stores, and Wharves shall post up NOTICES warning trespassers of their liability to penalties under this Section. Unless such notices are posted up occupiers are liable to a HEAVY PENALTY under this Section.
Speedy applications should be made for notices complete, complying with all the requirements of the said Act, and may be obtained from
JOHNSON AND CO., Dynamite Agents, Dudley.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.
DISTRICT UNDER THE CHARGE OF T. E. WALES, Esq.,
H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 27th, 28th, and 29th days of January, and CANDIDATES INTENDING TO PRESENT THEMSELVES AT SUCH EXAMINATION must, on or before the 31st day of December, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.
By order of the Board,
CHARLES HENRY JAMES, Secretary.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.
DISTRICT UNDER THE CHARGE OF JAMES WILLIS, Esq.,
H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this District for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, should at once COMMUNICATE with the Secretary to the Board of the above-mentioned District at the following address:—20, Archbold-terrace, Jesmond-road, Newcastle-upon-Tyne.
By order of the Board,
GEO. SOUTHERN, Secretary.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

GYPSUM AND LIMESTONE.

THE OWNER of an ESTATE in SUSSEX, under which there is a considerable bed of GYPSUM and LIMESTONE, will be willing to ENTER INTO ARRANGEMENTS with PARTIES OF STANDING, who would UNDERTAKE THE WORKING THEREOF, either in shares or on a royalty. The adjoining property is now in work, and the kilns and machines in action, and a branch railway connected with the South Eastern Railway.
For further particulars, apply to J. C. MAPPIN, Broadfield, Reigate.

NATIONAL PROVINCIAL BANK OF ENGLAND, BISHOPSGATE STREET CORNER OF THREADNEEDLE-STREET, LONDON, E.C.

The Directors of the National Provincial Bank of England hereby give notice, that a HALF-YEARLY DIVIDEND at the rate of EIGHT PER CENT. PER ANNUM, and a HALF-YEARLY BONUS OF FIVE PER CENT. will be PAYABLE on the Bank's Stock on and after the 9th day of January next, when the Dividend and Bonus Warrants may be obtained at the Bank, No. 112, Bishopsgate-street (corner of Threadneedle-street), or at the different branches.
The Transfer-books will be closed on and after Friday, the 12th instant, until the Dividend and Bonus become payable.
By order of the Court of Directors,
W. HOLT, }
R. FERGUSON, } Joint General
T. G. ROBINSON, } Managers.

December 9, 1879.

ST. JOHN DEL REY MINING COMPANY (LIMITED).

Notice is hereby given, that the HALF-YEARLY ORDINARY GENERAL MEETING of this Company will be HELD at the City Terminus Hotel, Cannon-street, London, on WEDNESDAY, the 17th day of December next, at Two o'clock precisely:—To receive and adopt the Directors' Half-yearly Report, and to declare a Dividend.
JOHN HOOKIN, Managing Director.
8, Tokenhouse-yard, E.C., 2nd December, 1879.

FINAL NOTICE.

THE NOUVEAU MONDE GOLD MINING COMPANY (Compagnie Anglo-Française à Responsabilité Limitée.) (LIMITED).

In pursuance of Article 9 of the Statutes of the company, the Gérant informs the shareholders that the SHARES MUST BE PRESENTED to the Chief Office, in Paris, No. 62, Rue de Provence; or to the London Agency, Lombard House, George-yard, Lombard-street, for the purpose of being controlled or vice.
This formality must be complied with within three months from this day; in default they will forfeit ALL THEIR RIGHTS, such as DIVIDENDS or otherwise, and the shares themselves will become absolutely forfeited.
Le Directeur Gérant, F. PAGANELLI.

December 4th, 1879.

TO THE SHAREHOLDERS OF THE UNITED VAN CONSOLS AND GLYN LEAD AND BARYTES MINING COMPANY (LIMITED).

THE DIRECTORS HEREBY GIVE NOTICE that, in consequence of the Progress of the Mining Operations being in every way satisfactory, and the Number of Applications for Preference Shares being large, they cannot RECEIVE APPLICATIONS for such shares at par after 31st December next.
JAMES COOPER, Secretary.
No. 3, Coleman-street Buildings, 25th November, 1879.

THE BODEGA,



86, 87, 88, BISHOPSGATE STREET WITHIN.

Wines of the well known brand of the BODEGA are sold in dock sample glasses, by the bottle, dozen, and quarter cask. Champagnes of every noted shipper by the bottle and glass. The prices are graduated from the wholesale shipment to the single glass. It is this system which has won for the BODEGA its great success, and which has been pointed out at great length both in the Times and other journals.

The premises stand on the historic site of the old Green Dragon, and are the largest in the United Kingdom devoted to the sale of wines wholesale and retail.

"The convivial spirit of the old house still haunts the spot, and refuses to be exorcised. . . . It is just the place for a Mining Exchange, and by the silent but irresistible law of fitness it seems already to have been so constituted."—Mining Journal.
"The cosiness of a private club and the economy of a BODEGA are most happily combined."—Continental Gazette.

Also at 42, GLASSHOUSE-STREET; 13, OXFORD-STREET; 5 and 6, BUCKLESBURY; THE ARCHES, LUDGATE HILL; and 72, MARK-LANE, LONDON.

NANT RHYS SYNDICATE (LIMITED).

NOTICE IS HEREBY GIVEN, that APPLICATIONS for the UNALLOTTED SHARES in this SYNDICATE will be RECEIVED FOR A SHORT TIME LONGER. Intending investors should apply immediately, as the NUMBER OF SHARES IS LIMITED, and they will be ALLOTTED IN THE ORDER OF APPLICATION.
By Order,
JOHN LORD, Secretary.

35, Queen Victoria-street, E.C.

NANT-Y-MOCH MINING COMPANY (LIMITED).

Capital £10,000, in 10,000 Shares of £1 each.

Prospectuses and Shares may be obtained on application to Capt. A. FRANCIS, M.E., Goginan, Aberystwith; or from ERNEST W. S. MURRANT, Esq., 8, St. Beacé-place, London, E.C.

SPAIN AND PORTUGAL.

MR. J. T. JOHNSON, Assoc. Inst. C.E., F.G.S., &c., CIVIL and MINING ENGINEER, late of Chester and South Wales, having joined his Brother, Mr. T. M. JOHNSON, who for the last 13 years has been engaged in Mining in Spain and Portugal, is prepared to INSPECT PROPERTIES and CARRY OUT GENERAL MINING and ENGINEERING WORKS in those countries.
ADDRESS: CORREIO DO CORVO, PORTUGAL.



PHOSPHOR BRONZE.

REGISTERED TRADE MARK.

THE BEST METAL FOR
BEARINGS, SLIDE VALVES,
PUMPS,
STEAM FITTINGS, &c.,

Supplied in Ingots or Castings.

WIRE, SHEETS, TUBES, &c.
For Ingot Quotations, see Prices Current, page 6.

Sole Manufacturers:

THE PHOSPHOR BRONZE COMPANY

(LIMITED):

139, CANNON STREET, LONDON, E.C.



PARIS,
BRONZE MEDAL, 1875.



ORDER OF THE CROWN OF PRUSSIA.



FALMOUTH,
SILVER MEDAL, 1867.

A DIPLOMA—HIGHEST OF ALL AWARDS—given by the Geographical Congress, Paris, 1875—M. Favre, Contractor, having exhibited the McKean Drill alone as the MODEL BORING MACHINE for the ST. GOTTHARD TUNNEL.

SILVER MEDAL of the Highland and West of Scotland Agricultural Society, 1875—HIGHEST AWARD.

At the south end of the St. Gothard Tunnel, where

THE MCKEAN ROCK DRILLS

Are exclusively used, the advance made during eight consecutive weeks, ending February 7, was 24'90, 27'60, 24'80, 26'10, 28'30, 27'10, 28'40, 28'70 metres. Total advance of south heading during January was 121'30 metres, or 138 yards.

In a series of comparative trials made at the St. Gothard Tunnel, the McKean Rock Drill continued to work until the pressure was reduced to one-half atmosphere ($\frac{1}{2}$ lbs.), showing almost the entire motive force to be available for the blow against the rock—a result of itself indicating many advantages.

The GREAT WESTERN RAILWAY has adopted these Machines for the SEVERN TUNNEL; the LONDON AND NORTH-WESTERN RAILWAY for the FESTINIOG TUNNEL; and the BRITISH GOVERNMENT for several Public Works. A considerable number of Mining Companies are now using them. Shafts and Galleries are driven at from three to six times the speed of hand labour, according to the size and number of machines employed, and with important saving in cost. The ratio of advantage over hand labour is greatest where the rock is hardest.

These Machines possess many advantages, which give them a value unapproached by any other system of Boring Machine.

THE MCKEAN ROCK DRILL IS ATTAINING GENERAL USE THROUGHOUT THE WORLD FOR MINING, TUNNELLING, QUARRYING, AND SUB-MARINE BORING.

The MCKEAN ROCK DRILLS are the most powerful—the most portable—the most durable—the most compact—of the best mechanical device. They contain the fewest parts—have no weak parts—act without SHOCK upon any of the operating parts—work with a lower pressure than any other Rock Drill—may be worked at a higher pressure than any other—may be run with safety to FIFTEEN HUNDRED STROKES PER MINUTE—do not require a mechanic to work them—are the smallest, shortest, and lightest of all machines—will give the longest feed without change of tool—work with long or short stroke at pleasure of operator.

The SAME Machine may be used for sinking, drifting, or open work. Their working parts are best protected against grit and accidents. The various methods of mounting them are the most efficient.

N.B.—Correspondents should state particulars as to character of work in hand in writing us for information, on receipt of which a special definite answer, with reference to our full illustrated catalogue, will be sent.

PORTABLE BOILERS, AIR COMPRESSORS, BORING STEEL, IRON, AND FLEXIBLE TUBING.

The McKean Drill may be seen in operation daily in London.

MCKEAN AND CO.

ENGINEERS
OFFICES,

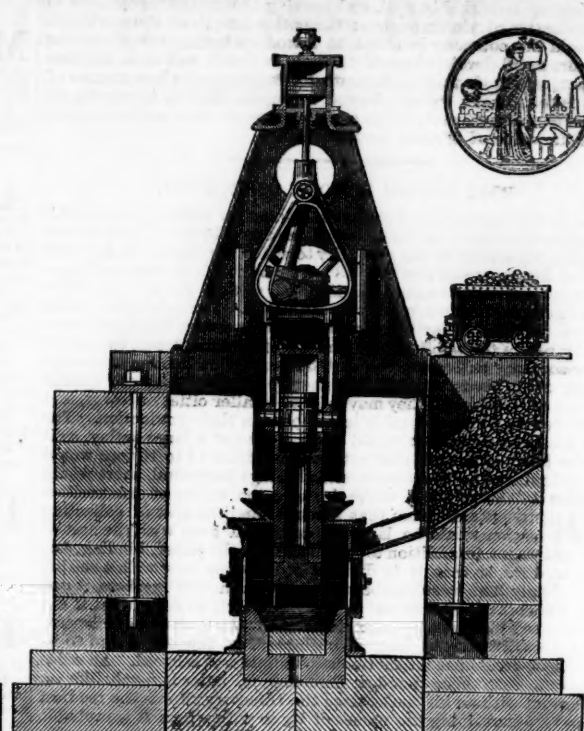
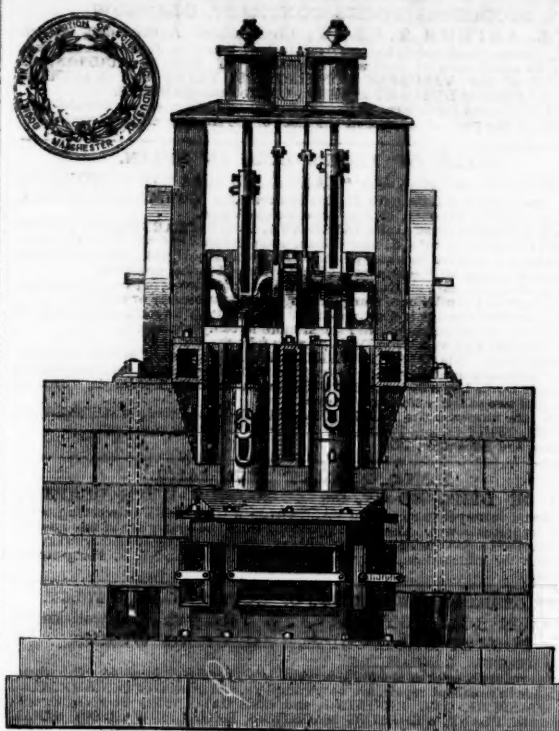
5, RUE SCRIBE, PARIS

MANUFACTURED FOR MCKEAN AND CO. BY

MESSRS. P. AND W. MACLELLAN, "CLUTHA IRONWORKS," GLASGOW.

Wheal Peavor, West Peavor, Wheal Boys, Wheal Prussia, North Trekerby, West Tolgus, East Pool, South Crofty, Carn Brea, Tincroft, Cook's Kitchen, Dolcoath, West Frances, South Frances, West Basset, Wheal Basset, Penstruthal, Comford, South Condurrow, Tolcarne, and all other adjacent and surrounding Mines in the parishes of Camborne, Illogan, Redruth, and Gwennap.

A MAP, showing the present Boundaries, &c., of the above Mines, coloured, but unmounted, for 10s. 6d., or mounted on cloth and rollers for 15s., may be had, carriage free, from the Author, H. SYMONS, 11, Parade, Truro, on his receipt of P. O. Order for the amount.



SHOLL'S PATENT DIRECT-ACTING PNEUMATIC STAMPERS,

For Pulverising Tin and Lead Ores, Gold Quartz, &c.,

SOLE MAKERS FOR CORNWALL,

N. HOLMAN AND SONS,

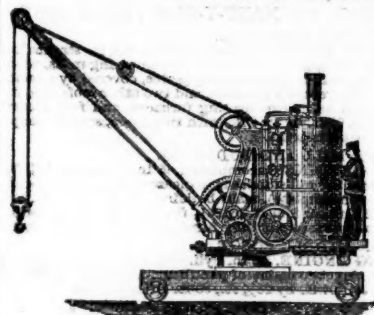
ST. JUST FOUNDRY, NEAR PENZANCE, CORNWALL.

ROTARY STAMPERS SUPPLIED ON THE SAME PRINCIPLE, ALSO WITHOUT STUFFING BOXES OR GLANDS, WHERE RUNNING GEAR EXISTS, OR WITH HORIZONTAL CONDENSING ENGINES AND BELTS TO DRIVE THEM, IF PREFERRED.

Also, SOLE MAKERS OF STEPHENS' PATENT PULVERISER.
MINING AND OTHER MACHINERY CONSTANTLY ON SALE,
NEW AND SECOND-HAND.

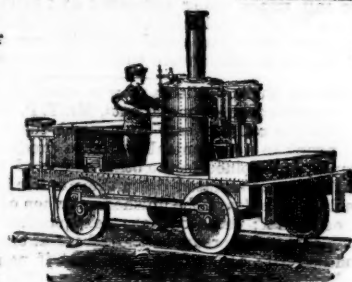
CHAPLINS' PATENT STEAM ENGINES AND BOILERS.

PRIZE MEDAL, INTERNATIONAL EXHIBITION.



STEAM CRANES,
Portable or Fixed, for Railways, Wharves, &c., for unloading
COAL, BALLAST, &c.,
To hoist 15 cwt. to 30 tons.

LOCOMOTIVES,
6 to 27-horse power. For Steep Inclines and Sharp Curves.
Gauge from 2 feet upwards.
Geared to draw very heavy weights in proportion to their power, and SPECIALLY
SUITABLE FOR



Contractors' Work, Railway Sidings, Coal Mines, Quarries, Gasworks, &c.

These Cranes were selected by H.M. Commissioners to receive and send away the Heavy Machinery in the International Exhibitions 1862, 1871, and 1872.

WIMSHURST, HOLICK, & CO., ENGINEERS.

Works: REGENT'S CANAL DOCK, 602, COMMERCIAL ROAD EAST, LONDON, E. (near Stepney Station).
CITY OFFICE: 2, WALBROOK, LONDON, E.C.

GRAND EXPLOSIVE COMBINED WITH PERFECT SAFETY.

MINING MADE EASY—POWER without DANGER.

The Liverpool Cotton Powder and Ammunition Company's
SAFETY COTTON BLASTING POWDER

Is the SAFEST, STRONGEST, and most ECONOMICAL in WORKING of all EXPLOSIVES. The MINERS, AFTER a shot is fired, can IMMEDIATELY recommence work. Absolutely SAFE in TRANSIT by boat or rail. PAR EXCELLENCE in every description of MINING, QUARRYING, TUNNELLING, EXCAVATING and SUBMARINE operations. Entirely free from Nitroglycerine.

Offices: 39, OLD HALL STREET, LIVERPOOL.

Works: MELLING, near LIVERPOOL.

AGENTS.—The Company have a few VACANCIES in the chief Mining Districts for really good and thoroughly PRACTICAL MEN. Apply to the Secretary, DAVID ANDERSON, personally, or by letter at the Offices of the Company.

WILLIAM EDWARDS AND SON,

Griffin Works, Wolverhampton,

MANUFACTURERS OF

Edge Tools, Spades and Shovels. Hand, Sledge, Stone Quarry, and Mining Hammers, Railway Contractors' and Mining Tools. Axes, Adzes, Pickaxes, Crow and Boring Bars, Wrought-iron Wheelbarrows.

The Original and Only Manufacturers of Best Crown Quality of Horse Shoes

PATENTEES and MANUFACTURERS of PATENT PUNCHED EYE PICKAXES, HOES, HAMMERS, ADZES, and other TOOLS,
Under Patent No 4698.

NOBEL'S DYNAMITE

MANUFACTURED AND SOLD BY

NOBEL'S EXPLOSIVES COMPANY (LIMITED), 149, West George Street, Glasgow.

Supplies may be obtained from any of the following Agents of the Company in Great Britain:—

HENRY KITCHIN and Co., 46, New Lowther-street, Whitehaven.
F. H. EDWARDS, FORTH HOUSE, Newcastle-on-Tyne.
I'ANSON, ARMSTRONG, and Co., Middlesbro'-on-Tees.
ALBERT RICKETTS, Dean-lane, Belmister, Bristol.
B. READ, Reforme, Portland, Dorsetshire.
LEIGH and SILLIVAN, Barton House, 66, Deansgate, Manchester.
GEORGE ROBERTS, George-street, Gloucester.
J. H. BRAN and Co., 6 Albion-street, Leeds.
WM. RICH and Sons, 4, Bisset-street, Redruth, Cornwall.
CROSS BROTHERS, 21, Working-street, Cardiff.
G. WILLIAMS, 6 and 7, Baker-street, Aberystwith.
WRBB and Co., Llanberis, Caernarvon.

J. T. EACHUS, Holywell.
JOHNSON and Co., Tower-street, Dudley.
TODHUNTER and ELLIOT, Market-place, Douglas, Isle of Man.
ROBERT HAMILTON, 20, St. James's-square, Edinburgh.
JOHN DONALD, 4, Belmont-street, Aberdeen.
WILLIAM WATSON, Sunnyside-road, Coatbridge.
ROBERT HAMILTON, Douglas-street, Dunfermline.
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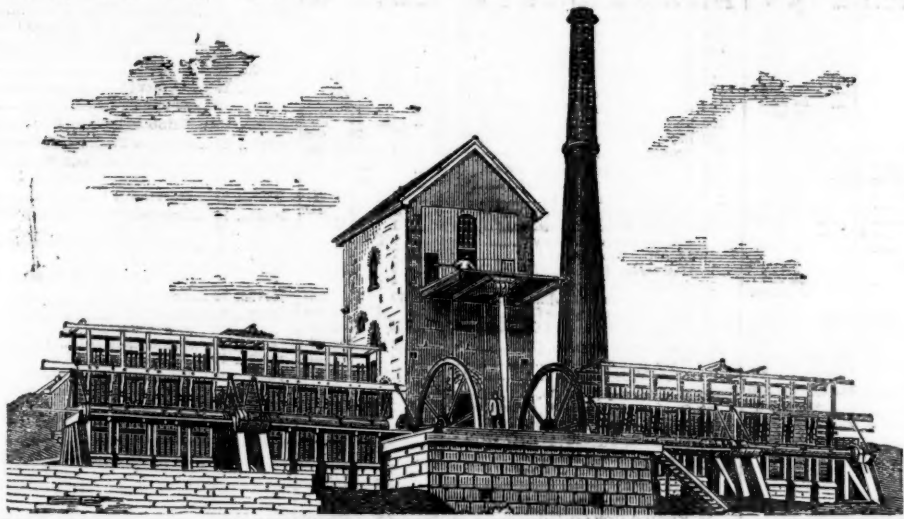
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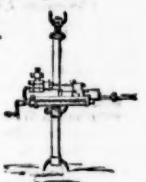


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